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OXFORD

ASSOCIATE IN ARTS EXAMINATION.

§c. §c.

A D V E R T I S E M E N T.

With regard to all reasonings and opinions contained in this volume, it is to be understood that in each case the writer alone is responsible for them.

SOME ACCOUNT
OF THE
ORIGIN AND OBJECTS
OF THE
NEW OXFORD EXAMINATIONS
FOR THE
TITLE OF ASSOCIATE IN ARTS
AND CERTIFICATES.

For the Year 1858.

BY T. D. ACLAND, Esq.,

LATE FELLOW OF ALL SOULS COLLEGE, OXFORD.

ALSO

LETTERS FROM J. HULLAH, ESQ., W. DYCE, ESQ., J. RUSKIN, ESQ.,
G. RICHMOND, ESQ., AND REV. F. TEMPLE;
AND SELECTED PAPERS RELATING TO THE WEST OF ENGLAND EXAMINATION.

SECOND EDITION.

TO WHICH ARE APPENDED

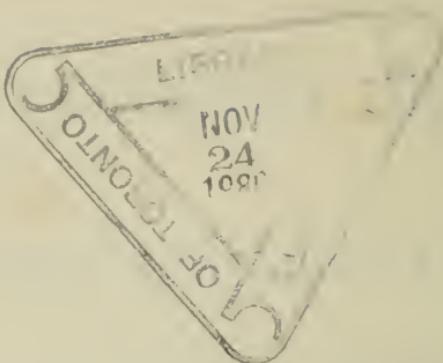
THE REGULATIONS ADOPTED BY THE UNIVERSITIES OF CAMBRIDGE
AND DURHAM.

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PREFACE TO SECOND EDITION.

THE first edition being exhausted, this volume is reprinted with a few trifling corrections, for the convenience of those who may still wish to refer to the experience gained at Exeter in 1857. I have added the Regulations adopted by the Universities of Cambridge and Durham, together with such information as I have been able to obtain of similar measures in progress under the authority of the Board of Trinity College, Dublin, in order to complete the record of the first attempts to bring the honours of the Universities to bear on what is called “Middle Class Education.”*

The general similarity between the Regulations of the two elder Universities in England is a gratifying result of the unreserved intercourse which took place between the Oxford Delegates and the Cambridge Syndicate last autumn.

The Cambridge Regulations are remarkable for the elegant precision which is characteristic of all that emanates from that University. The mathematical subjects so clearly marked out, and the text-books in literature so well selected, cannot fail to give useful direction and support to the efforts of teachers hitherto beyond the range of University influence.

* The following extract from an article in the College Magazine, Dublin, written by Dr. Shaw, Fellow and Tutor of Trinity College, Dublin, gives, in a few words, a striking explanation of this vague term:—

“The phrase ‘Middle-Class Education’ may seem at first sight to be indefinite in meaning, inasmuch as the different sections of our middle class exhibit the widest diversity in the kind and amount of education which they receive. But much of this indefiniteness will disappear from the expression when the adjective ‘middle-class’ is understood to apply, not so much to the individual educated, as to the education itself,—as one lying between the high culture attainable at a University and the humble rudiments acquired at a parish school. It is an education, then, which, while it does not aspire to make philosophers or scholars, yet aims at qualifying a man for higher work than that of hewing wood and drawing water; one which fairly develops his faculties of observation, of judgment, of reasoning; which enables him to bring some intelligence to the affairs of his office, his shop, or his farm; which prepares him for the ordinary duties of a citizen in a free state, and gives independence to his vote and weight to his opinion. Such an education need not involve a knowledge of Greek, of Metaphysics, or of the higher Mathematics; but it ought to bestow some command over English and French, some insight into History, Political Economy, and Physical Science, and some power of enjoyment in the fields of Literature and Art.”

The difference in some of their details between the Cambridge and Oxford Regulations has been made the subject of public comment at one of the most important centres of local examination. It may therefore be well to state what they are.

I. As regards the conditions and the results of the Examination, there are three points to be noted : the *age of the Candidates*, the *fees to be paid*, the *honour to be awarded to successful Candidates*.

II. As regards the matter of the Examination, the Cambridge scheme differs from that of Oxford chiefly with reference to the examination in *Religious knowledge* and (as regards the junior candidates only) in *English*.

Age of Candidates.—The age of the senior Candidates is in both cases the same, namely, under eighteen years. Both Universities refuse to affix their stamp on education, after eighteen, without residence.

Cambridge allows the junior Examination to be passed till the age of sixteen, yielding, it is presumed, to the strong representations which reached both Universities in favour of extending the period fixed by Oxford at fifteen. These representations are supposed to have come chiefly from the higher or classical schools. The effect of allowing an extension of age to the boys will probably be to let in a large number of candidates from the grammar-schools to compete with the best boys from commercial schools. It may be doubted whether this is an advantage, and whether, as regards one primary object of the Examination—viz. the improvement of schools for those who are preparing for trade and agriculture—the results of change will not be in the wrong direction. After a few years, if it shall be found that the effect of the University Examinations has been to elevate the general standard of commercial education, and that adequate motives exist to induce parents in the lower middle ranks to spare their sons from trade for another year, the line which is now drawn, in consistency with real distinctions in society, at fifteen, may perhaps be drawn more correctly at sixteen. I have reason to believe that the age at present fixed by Oxford is satisfactory to eminent commercial schoolmasters.

Fees.—It is a natural consequence of the nearer approximation of the ages of the senior and junior Candidates in the Cambridge scheme that a uniform fee of 20s. has been fixed for both classes, instead of two fees—one of 30s., the other of 10s. If it is thought desirable to discourage commercial scholars among the

juniors from a dread of the overpowering number of Candidates, the higher fee for the junior class may have this effect; while the lower fee for the seniors may be, in some cases, accepted as a set-off to the lower honour to be given.

Honours.—The honours to be awarded at Cambridge to successful Candidates differ in two respects from those offered at Oxford: first, honour will not be given separately for success in particular subjects, but only for the general result of the education; this course is adopted at Oxford as regards boys under fifteen, but, as regards Candidates under eighteen, Oxford offers separate classes in Language, Science, and the Arts. In the second place, while at Oxford the names both of senior and junior Candidates in the first class are to be arranged in order of merit—those in the second and third classes being placed in alphabetical order—the Cambridge lists are to be in alphabetical order throughout. It is remarkable that both Universities apply to their juvenile aspirants from without a principle opposed to their respective practice in the examination of their resident alumni. Oxford appears to have acted with a view both to single out provincial talent of the highest order, and to encourage the improvement of school instruction in particular subjects; Cambridge, it is presumed, with a view to give a more boyish character to the Examination, and to encourage general and preparatory training. Cambridge also refuses to give to the successful senior Candidates the title “Associate in Arts.” The objections to this title are fully discussed in the following pages; and, nothing new having been advanced on the subject, it may be left to experience to decide which University has judged most wisely in this particular.* The course adopted by

* I cannot, however, forego the pleasure of referring to some remarks of Dr. Shaw, of Dublin, as a confirmation of what I have already urged:—“Our chief object in the present paper was to point out the improvements which may be expected to result in middle-class schools from the institution of a corresponding system of University Examinations. To this work we trust that the governing bodies of our two [Irish] Universities will soon and seriously address themselves. If they neglect it much longer, it will inevitably be undertaken in other quarters, and the Universities will incur no small loss of educational and social influence. Let not these learned bodies suppose that they consult their dignity by ignoring the educational wants of our mercantile classes, and, as a consequence, allowing the intellectual life of every successive generation to drift further and further away from University ideas and modes of culture. Of course there are objections to be met, apprehensions to be removed. There always are lions in the way when any good service is to be done. ‘The proposed Ex-

Cambridge in offering an examination, with no other inducement than the value to be attached to its verdict alone, is, at least, bold and straightforward. Meanwhile, the number of Candidates entered for the Oxford Examination has proved that the award of merit by the Universities in some form is likely to be highly valued by the country.

The most serious divergence between the two Universities relates to Religious knowledge; for the assertion made that Oxford does not encourage English for its junior Candidates, though capable of a literal justification, is practically without foundation. The preliminary examination of the junior Candidates is, in fact, an English branch, including English History, Geography, English Composition, and the reading of a Classical English Author ; it has as much time allotted to it in the Time-table for the Examination-week, as English Literature for the seniors. This arrangement is in accordance with the views of practical schoolmasters, and is obviously better suited to the age of the boys than Literary Criticism or Philology.

Religious Knowledge.—The Examination in the rudiments of Faith and Religion at Oxford rests on a definite basis—that of the Church of England. It must be wholly accepted or wholly

aminations,' say one party, ' will attract no candidates, as no one will regard the degree of Associate as an honour.' Another party apprehend the opposite danger. 'The degree of Associate,' say they, ' will come in a short time to claim the same respect and be favoured with the same privileges as the existing Degree of A.B., and, being more easily attained, will be almost universally taken instead; so that there will be an end of your proper University teaching.' These opposite views seem to us equally fallacious. The degree of A.A. will not be despised, if it truly attest a good middle-class education, nor will it supersede the A.B. degree so long as University examiners and lecturers do their several duties conscientiously. They who fear that it will, betray the poor opinion which they have of ordinary University education. They evidently regard this as of so low a type, or else of so doubtful a utility, that it will fall into general contempt as soon as the education of our tradesmen, and clerks, and farmers, is considerably improved. If this be a true account of the education implied in the A.B. degree, the sooner that costly delusion be abolished the better. But to us the education of the graduate, even of the 'unclassed candidate,' seems to be a reality : not, indeed, all that it might be, but still something sufficiently valuable to be able to hold its ground against the competition of its middle-class rival; and certain to advance *pari passu* with the improvement of the latter. In fact, we do not agree with these objectors in regarding University education as a market-town, and the proposed Examinations as a railway which will supersede its functions, and destroy its prosperity ; but with us University education is rather a capital city which the proposed railway will put in communication with a great district, the resources of which are at present undeveloped."

rejected. It stands as a distinct department by itself, to be passed for its own intrinsic value in the eyes of parents and guardians, with whom alone it rests to withdraw a candidate from this part of the examination. It carries with it no secular inducement in the form of marks to be counted towards the place of the Candidate in the class list.

It was felt at Oxford that this course was most consistent with the circumstances of the University, and with perfect fairness to Dissenters. In certain quarters this decision was vehemently objected to on two grounds, first, that Oxford was lending its sanction to the principle that religion was a non-essential in education; and secondly, it was urged, without reference to abstract principles, that to give no marks for a religious examination must have a practical tendency to lead masters and pupils to neglect the subject. These views, pressed as they evidently were with the deep earnestness of conviction, were entitled to, and have received, attentive consideration.

An attempt has been made at Cambridge to meet (partially at least) the objections referred to, by taking away every encouragement to the improper exercise of the option given to parents of declining the religious examination. The examination in Religious knowledge is put exactly on the same footing as that in Latin or Greek or Mathematics. It is one of so many subjects, out of which three must be selected : if Religious knowledge be not selected, a secular subject must be prepared instead, so that mere idleness gains nothing by the omission. Secondly, whatever marks are gained for answers to the questions on religion count towards success in the honour lists ; so that diligence (provided the Candidate be not a Dissenter) loses nothing of its earthly reward for time spent on religion. But, as this may seem to bear hard on the Dissenter, another door is opened to facilitate his path towards honour. If he is willing to be examined by the authorities of Cambridge in his knowledge of the Holy Scriptures, he is at liberty to decline the Church Catechism on condition of substituting for it ‘Whately’s Evidences’; and to decline the Common Prayer Book, if he offers Paley’s ‘Horæ Paulinæ’ in lieu thereof.

There can be no doubt that these Regulations have been very carefully framed with a view to enlist the ordinary motives of human nature on the side of our holy religion, but it is difficult to predict beforehand what their practical working will be.

The Oxford arrangements rely wholly on the parental care for the religious welfare and information of youth, to use a common word in an old sense. They call attention to the subject, they leave the choice bonâ fide to the conscience of the parent, whether Churchman or Dissenter, and they put both with perfect fairness on the same footing. Above twelve hundred Candidates have entered their names for the Oxford Examination; a very large number of these candidates come from the great towns, in which it is not unnatural that an Oxford examination in religion should awaken some suspicion. It is on the whole satisfactory that above 800 candidates are entered for the examination in faith and religion. Out of eighty-five Candidates to be assembled at Exeter, where experience has been had of religious questions, only two of the senior candidates, and nine of the junior candidates, decline the religious examination.* There is reason to believe that many of those in other parts of the country who have declined are not influenced by any objections on the ground of doctrine. Some parents, it is known, much regret that their sons have not been properly prepared in this subject, and hope that the defect will be remedied before another year.

The subject is one, confessedly, of great difficulty, but if we reflect on what the religious teaching in Universities and Public Schools used to be fifty years ago, when exclusive regulations were in full force, and contrast it with the teaching in Schools and Colleges of various denominations under Government inspection at the present day, we can hardly maintain the opinion that uniformity of system is the surest pledge for the support of religion, or that the battle of the Truth is best fought with closed doors.

It remains only to say that the hopes expressed in the first

* The proportion in which the candidates offer themselves for examination in Religion at the several centres is as follows:—

Exeter	87 per cent.	Bedford	68 per cent.
Cheltenham	83 ,,	Leeds	37 ,,
Liverpool	82 ,,	Birmingham	35 ,,
London	80 ,,	Manchester	25 ,,
Southampton	78 ,,		—
Oxford	76 ,,	Average proportion	66
Bath	73 ,,		

It is worthy of note that the proportion of senior candidates withdrawn is much lower than that of the juniors,—about a fourth instead of about a third.

edition of this volume, that local zeal would not be wanting to carry into effect the requisite arrangements, have been justified by the formation of active Committees at Liverpool, Manchester, Leeds, Birmingham, Bedford, London, Southampton, Cheltenham, Bath, and Exeter. The requisite preparations at Oxford are far advanced. The arrangements for the week of examination have been fully considered, so as to give fair play to every branch of the Examination, and the services of a staff of Examiners, whose names will speak for themselves, have been secured.

The subjects in which the Candidates offer to be examined are shown in the subjoined Table, which affords remarkable proof that the elder studies of language and mathematics are those on which the most active-minded teachers in England still rely for the success of their pupils.

The promised response to an examination in English Literature is encouraging. Botany and Physiology are not as yet a reality in English schools. Much use might be made of them as collateral instruments for awakening habits of observation and inquiry; but it is little to be desired that they should supersede studies of far more general application for mental discipline.

Chemistry appears to be adopted as a principal means of mental training at certain places, especially at Swansea, Queenwood in Hampshire, and also, apparently, in London, at Manchester, and Birmingham.

How far the Arts will enter as a reality into the Examination, cannot be foretold. The Candidates in Drawing are numerous; after a careful examination of the Returns, I find that Drawing is much more often joined with the study of Language than with that of Science. Music and Drawing are only offered together by two Candidates. About twenty of the senior Candidates appear to rely on their proficiency in the Arts for their success, if an inference may be drawn from the small number of other subjects offered by them for examination.

The narrative of the results of the forthcoming Examinations will pass into more competent hands at each University. Meanwhile, it may not be presumptuous to hope that the illustrations which this volume contains of the steps which have led to them may have some interest for those who believe that in our English freedom of Education lies one of the guarantees for our national life and unity.

May 20th, 1858.

SUBJECTS SELECTED FOR EXAMINATION BY THE CANDIDATES.—OXFORD, 1858.

SENIOR CANDIDATES.

Number of Candi- dates.	Bud- iments of Faith and Reli- gion.	Section A.—ENGLISH History.		Section B.—LANGUAGES.			Section C.—MATHEMATICS.			Section D.—PHYSICS.			Sect. E.		Sect. F.		
		English History.	Shak- spere and Bacon.	Latin.	Greek.	French.	German.	Pure Mathe- matics.	Practical Mathe- matics.	Natural Philoso- phy.	Chem- istry.	Vegetable and Ani- mal Physio- logy.	Drawing and Archit- ecture.	Mus- ic.			
Oxford ..	56	40	51	22	5	25	31	16	34	10	42	9	14	1	13	6	
London ..	114	93	103	21	12	68	83	32	101	25	95	22	30	28	6	47	6
Bath	14	10	13	5	5	4	12	10	12	6	12	1	2	3	1	2	2
Bedford ..	12	9	11	5	1	5	7	3	7	1*	12	2	1	2	0	2	2
Birmingham	36	12	30	18	4	15	23	12	26	8	25	3	6	14	1	11	3
Cheltenham	38	35	37	11	3	27	29	21	29	5	33	6	7	3	0	15	1
Exeter	29	27	29	11	2	19	22	7	17	2	24	7	8	0	0	4	2
Leeds	35	18	36	16	5	14	24	15	28	6	31	11	7	4	1	5	2
Liverpool ..	38	35	35	15	12	24	27	27	31	4	29	7	9	5	5	21	2
Manchester	26	7	21	0	0	7	7	0	22	8	21	1	2	8	1	8	1
Southampton	25	18	17	3	1	10	11	5	13	1	16	1	1	12	1	4	3
Total ..	423	304	383	127	50	218	276	148	320	76	340	70	82	93	17	132	30

JUNIOR CANDIDATES.

	Number of Candidates.	Rudiments of Faith and Religion.	Latin.	Greek.	French.	German.	Mathematics.	Mechanics and Mechanism.	Chemistry.	Botany and Zoology.	Drawing.	Music.
Oxford	77	61	45	12	51	2	58	28	19	0	6	20
London	237	188	167	40	205	15	188	28	32	0	47	15
Bath	60	44	35	14	30	3	41	22	3	0	17	2
Bedford	23	15	16	13	12	0	19	1	2	0	4	1
Birmingham	58	21	39	7	32	1	37	9	8	2	23	2
Cheltenham	36	27	32	19	23	0	32	5	6	0	5	0
Exeter	55	46	44	6	23	2	44	8	0	3	20	6
Leeds	73	22	55	11	50	7	39	18	3	0	19	3
Liverpool	60	46	40	13	45	8	48	4	8	0	13	3
Manchester	99	25	44	3	67	4	62	8	30	0	16	0
Southampton	22	19	13	4	14	0	18	1	7	0	3	0
Total	800	514	530	142	552	42	586	132	118	5	173	52

UNIVERSITY OF OXFORD.—TIME TABLE.

*The Examination will commence on Monday the 21st of June, at Two o'Clock P.M.
SENIOR CANDIDATES.*

MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
B. i. Latin. (See Saturday, 8.30 A.M.)	9 A.M. to 12. C. i. Continued. Euclid. Trigonometry. (See Saturday, 3.30 P.M.)	9 A.M. to 12. B. 2. Greek. (See Saturday, 8.30 A.M.)	9 A.M. to 12. C. 2. Practical Mechanics (including Mechanism), Hydrostatics, Surveying, Navigation.	9 A.M. to 12. C. 2. Practical Mechanics (including Mechanism).	8.30 to 11.30 A.M. B. i. 2. Latin and Greek; with Composition. (<i>A more advanced Paper.</i>)
		2 to 5 P.M. A. 1. English History. C. i. Algebra (to Quadratics inclusive.)	2 to 5 P.M. A. 1. English History. 3. Law and Political Economy. 4. Geography. (Continued on Wednesday, at 9 A.M.)	2 to 5 P.M. D. 1. Natural Philosophy. (Mechanical Drawing.)	12 Noons to 2.30 P.M. A. 1.-4. English. * The practical examination will be held in the Evening, at 6 P.M., or on Saturday;
	2 to 5 P.M. 1. Analysis and Parsing, &c. 2. (See Wednesday, 6 P.M.) 3. (See Tuesday, 2 P.M.) 4. Geography. 5. English History.	6 to 8.30 P.M. II. 1. 2. 3. Rudiments of Faith and Religion.	6 to 8.30 P.M. I. 2. Short English Composition. A. 2. Shakespeare and Bacon. (See Saturday, 12 noon.)	6 to 8.30 P.M. B. 4. German.	3.30 to 6.30 P.M. C. 1. Pure Mathematics. D. 3. Physiology. (Botanical and Anatomical Drawing.) (<i>A more advanced Paper.</i>)
					SECTION E.—Candidates will be allowed for Drawing (not exceeding) 6 hours when they are not otherwise engaged : and a paper of questions will be given at such time as the Examiner at each place shall find to be convenient.

MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
9 A.M. to 12. III. 1. Latin.	9 A.M. to 12. III. 5. (<i>Continued.</i>) Euclid I. II. III. IV. VI. <i>See Friday, 2 p.m.</i>	9 A.M. to 12. III. 2. Greek.	9 A.M. to 12. III. 7. *Chemistry. 8. Botany and Zoology.	9 A.M. to 12. III. 8. Plane Trigonometry. Use of Logarithms. Mensuration. Practical Geometry.	8.30 to 12.30 A.M. III. 5. (<i>Continued.</i>) Plane Trigonometry. Use of Logarithms. Mensuration. Practical Geometry.
2 to 5 P.M.	2 to 5 P.M. I. 1. (<i>At the Examiner's convenience.</i>) 2. Writing from Dictation. 3. Analysis and Parsing. 4. <i>See Wednesday,</i> 6 P.M. 5. Arithmetic (ele- mentary.) 6. 7. <i>See Wednesday,</i> 2 P.M.	2 to 5 P.M. III. 5. Arithmetic, Algebra (to Simple Equa- tions inclu- sive.) <i>(Continued on Wed- nesday, at 9 A.M.)</i>	2 to 5 P.M. I. 6. Geography. 7. English History.	2 to 5 P.M. III. 6. Mechanics and Mechanism. (Mechanical Drawing.) <i>(A more advanced Paper.)</i>	2 to 5 P.M. III. 1. 2. Latin and Greek.
6 to 8.30 P.M.	6 to 8.30 P.M. III. 3. French.	6 to 8.30 P.M. II. 1. 2. Rudiments of Faith and Re- ligion.	6 to 8.30 P.M. I. 4. Short English Composition.	6 to 8.30 P.M. III. 4. German.	6 to 8.30 P.M. IV. 2. Music.

SECTION IV. 1.—Candidates will be allowed for drawing (not exceeding) 6 hours when they are not otherwise engaged.

N.B. No drawing can be removed from the examination room after it has been begun.

J. E. SEWEILI, Hon. Sec., Oxford, May 15, 1853.

LIST OF EXAMINERS AT OXFORD.

Rev. W. THOMSON, D.D., Provost of Queen's College	<i>Rudiments of Faith and Religion.</i>
Venerable B. HARRISON, M.A., Ch. Ch., Archdeacon of Maidstone	
F. R. SANDFORD, Esq., M.A., Balliol College, Council Office	<i>Preliminary Examination.</i>
T. WALROND, Esq., M.A., Balliol College, Civil Service Commission	
Rev. S. CLARK, M.A., Magdalen Hall, Principal of the Training College, Battersea	
Rev. C. P. CHRETIEN, M.A., Fellow and Tutor of Oriel College	<i>English History and Literature.</i>
M. BERNARD, Esq., B.C.L., Trinity College	
Rev. A. P. STANLEY, M.A., Ch. Ch., Regius Professor of Ecclesiastical History	<i>Higher English Paper.</i>
Rev. T. F. HENNEY, M.A., Fellow and Tutor of Pembroke College	
Rev. W. B. T. JONES, M.A., Tutor of University College	<i>Latin.</i>
Very Rev. A. P. SAUNDERS, D.D., Ch. Ch., Dean of Peterborough	<i>Greek.</i>
Very Rev. H. G. LIDDELL, D.D., Dean of Christ Church	<i>Higher Classical Paper.</i>
M. JULES BUÉ, French Teacher in the Taylor Institution	<i>French.</i>
M. BERTRAM	<i>German.</i>
W. SPOTTISWOODE, Esq., M.A., Balliol College	
H. J. S. SMITH, Esq., M.A., Fellow and Tutor of Balliol College	<i>Mathematics.</i>
W. F. DONKIN, Esq., M.A., University College, Savilian Professor of Astronomy	<i>Mechanics.</i>
Rev. H. HIGHTON, M.A., Queen's College	<i>Natural Philosophy.</i>
B. C. BRODIE, Esq., B.A., Balliol College, Professor of Chemistry	<i>Chemistry.</i>
T. K. CHAMBERS, Esq., D. M., Ch. Ch.	<i>Physiology.</i>
J. RUSKIN, Esq., M.A., Ch. Ch.	<i>Drawing, including—1, Free Hand Drawing; 2, Perspective; 3, Design; 4, Architectural Drawing.</i>
W. DYCE, Esq., R.A.	
G. RICHMOND, Esq., R.A.	
F. P. COCKERELL, Esq.	
S. EVANS, Esq.	
Rev. Sir F. G. OUSELEY, Bart., M.A. and D. Mus., Ch. Ch., Professor of Music	<i>Music.</i>
J. HULLAH, Esq.	
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C. S. PARKER, Esq., M.A., Fellow and Assistant Tutor of University College.	
Rev. J. BARMBY, B.D., Fellow and Mathematical Lecturer of Magdalen College.	
	J. E. SEWELL, Hon. Sec.

Oxford, May 15th, 1858.

INTRODUCTORY NOTICE,

WITH ESPECIAL REFERENCE TO RECENT OBJECTIONS.

Two objects are aimed at in this volume.

First. To give substance to the vague idea suggested by the title of "Associate in Arts of the University of Oxford."

Secondly. To point out some of the conditions necessary for the useful co-operation of the Universities with persons already interested in Middle Class Education.

The plans proposed at Oxford require local as well as central administration, and each is essential to the success of the other. To borrow a happy illustration from the originator of the 'Oxford extension' scheme, Oxford has opened a locomotive department; the first line of rails having been laid down by the West of England. An illustration so temptingly fertile must not be worn threadbare, but all will agree that we were fortunate in having the present Head-Master of Rugby for our consulting engineer; in urging on others the importance of a good local line, I may be forgiven for reminding the reader that in the West we run upon the 'Broad Gauge'; and, for expressing strongly the opinion that those who wish the Oxford Engine to run smoothly in other districts must be at some pains and expense to start it well.

In short, to drop metaphor, there must be no narrowness, no slackness or want of energy, in a movement which, if it is worth anything, is worth a good deal of zeal and trouble. Liberality of time and money may be required at first from those who have either to spare, but at any rate confidence in great principles, forbearance in details, and clear business-like habits, are absolutely necessary for the success of a scheme in which many who have not been in the habit of acting together will be brought into close contact for the first time.

One main purport therefore of the present volume is to give an account of the experiment tried last year in the West of England. Details which might seem unworthy of being recorded are given at the urgent and repeated request of others who feel the need of further information. I am well aware that the only interest this account can awaken is due to the evidence it may afford of the working of various minds to one common end.

More I need not have said by way of preface had I not observed, since the following pages have been in type, that very indistinct ideas prevail as to the nature of the statute passed at Oxford, and that there is some misconception of the objects and designed tendencies of the proposed examinations.

It may, therefore, be not useless first to state shortly what has actually been done, and then to examine what ground there is for some of the remarks which have been made on the subject.

On the 18th of June last the University of Oxford passed a statute, establishing two examinations for "those who are not members* of the University," one for youths "under 18," another for boys "under 15."

The convocation created a delegacy (or commission) with legislative and executive powers for the special purposes defined by the statute; these powers are to expire in three years, and convocation must then legislate again.

In the mean time it has devolved on the delegacy to frame a scheme of examination, to appoint Examiners, to fix the scale of fees, and to arrange all other details.

The Examination will be held at various centres at the same time; the places to be fixed by the Delegates as they may deem

* It is necessary to notice that this description of the Candidates dates from the passing of the Statute: because an incorrect statement has been inadvertently made that the character of the scheme has been changed, a statement originating apparently in the fact that an unpublished draft of a paper drawn up for the use of the Delegates was headed, for convenience, "Middle Class Examination Delegacy." The correct heading, founded on the Title of the Statute, is the only one which has been published by the Delegacy, viz. "Regulations for carrying into effect the Statute concerning the examination of those who are not members of the University."

expedient.* They will require the formation of a proper committee, which will undertake to conduct the local details, and to provide for all expenses incident to a local examination.

The Examinations are open to all persons of whatever social rank or religious denomination; age and non-matriculation are the only limits.

Candidates, whose parents do not formally object, will be examined in the rudiments of Faith and Religion. Those whose parents do object will simply omit this part of the Examination, and there will be no substitute for it.

All must satisfy the Examiners that they have mastered the elements of a plain English education, after which they are allowed a wide latitude in the selection of subjects of study.

Boys under 15, who succeed in the lower Examination, will obtain a certificate. Youths under 18, who pass the higher, will receive the title of Associate in Arts. They will be arranged in divisions, partly in order of merit, partly in alphabetical order.

The following pages will show some of the facts laid before the University to induce it to take the steps thus shortly described; they will prove that the question presented itself in a form ripe for decision, and give some evidence of the care with which the details have been wrought out since the Statute was passed. They will also prove the desire that the views of the sister University should be consulted. In point of fact, as is apparent from the letters of the two Vice-Chancellors,† the subject was brought before both Universities nearly at the same time.

The chief objections brought against the Oxford Regulations are such as the following: the magnitude of the scheme and the difficulty of finding suitable examiners,—the littleness of a scheme which will call on a learned body to deal with such subjects as

* Measures are already in progress for the formation of local committees in five important towns. Speaking for myself alone, I may state my own impression, that, for various reasons, it will be found expedient at first not to multiply, to any great extent, the centres of examination, nor to aim at the entry of a large number of candidates for the year 1858.

† See p. 81.

land-measuring and bookkeeping,—again, its unpractical character in not giving due prominence to these commercial subjects.

It is urged by some that the examination in religion ought to be compulsory ; and that if compulsory it must be impracticable, or else so vague as to be worthless,—that the tendency of examinations is to raise too high a standard, but that if the standard be kept low the title will be sought as an advertisement for trading purposes ; and that to dignify retail shopkeepers with a title is to make them as well as the Universities ridiculous,—that the prestige of the old Universities depends on their honours not being made to be cheap, and that those honours ought only to be awarded to students of mature age who have fulfilled conditions of which examination alone furnishes no adequate test.

I have endeavoured to state the objections fairly, even strongly ; I will not attempt to show that they destroy each other, because arguments apparently contradictory sometimes rest on the same real ground. Neither do I propose to discuss them in detail. I wish to meet them on the merits fairly, and elicit the principles into which they substantially resolve themselves, putting aside, as irrelevant, objections which apply equally to all examinations whatever ; such as their imperfection as a test, their tendency to encourage cram and conceit ; and, admitting what cannot be denied, that the scheme is somewhat alarming in its possible dimensions and open to amendment in details.

The prominent point of attack is the Title, and the strength of the attack lies in this, that two lines of argument converge against the term Associate. The one is used by persons who would guard with great jealousy the gentlemanlike character of the University, and think the social distinction of a degree compromised by the new title. The other is used by those who would gladly extend the circle of academical influence to a lower grade in society, but fear some dereliction of principle in making the University responsible for an education defective in any essential point.

Both objections proceed from inadvertence to the relation now subsisting between the University and the rest of the nation.

The value of a University title, apart from the fact of its being

still a necessary passport to certain posts in life, may be stated generally to consist in its being accepted in the world, though with some reservation, as evidence of two kinds of training, one social, the other mental. I do not name the third, religious training, first, because that is supposed to enter into both social and mental discipline ; and secondly, because the recent acts of the Legislature have imposed on the Universities the necessity of conferring a degree without requiring evidence of sound religious training as a condition.

* Time was when Oxford and Cambridge possessed a virtual monopoly of the higher branches of education, and commanded the entrance to the chief posts, not only in the Church, but also at the Bar and in Medicine. This is no longer the case. To the causes of the change, whether within or without the Universities, I need not refer in detail ; one, however, is germane to the matter in hand—the growth of physical science in connexion with manufactures and locomotion.

This has told both on the Universities and on the nation. The first consequence has been that the comfortable maintenance inaccessible within the Universities has been often supplied to scientific men by boards of directors and trading companies.

The second, that a new form of social influences has sprung up in the metropolis and elsewhere. Science has supplied the common ground on which the noble, the divine, the philosopher, and the engineer, have been glad to meet, whether at the soirées of the aristocracy, at scientific societies, or in social clubs.

Concurrently with the spread of new intellectual and social influences the world has been gradually finding out one deficiency which not only prevails in the ranks of practical men, but even affects some grades of the professions—I refer to the want of a *good general education* as a preparation for scientific and commercial pursuits.

In proportion as Oxford and Cambridge have seen the necessity of giving a more prominent place to Natural Science in the complete education of an English gentleman, practical men have been learning the value of Classics and Mathematics. The world now

knocks at the door of the schools and of the senate-house, and asks for help to guide its children in general education. But it is obliged to name its own terms as to the conditions under which it can accept such guidance. In this busy populous country few parents can afford to keep all their sons under education from 18 to 21. Some of their sons must enter into business at 18 at latest, but many parents would wish all their sons to receive a good classical and mathematical training up to that age. In order, however, to gain this desirable end, they must give the lads an object to work for. They ask to be allowed to hold out to them the hope of some academical certificate of their mental training, although that mental training be for them divorced from social influences of great value.

The recognition of this actual state of facts is a great part of what is asked for at the hand of the Universities. I contend that Oxford has acted wisely in granting the request with a good grace, and in putting itself in harmony with the generation on which it is bound to act; and that it may reasonably hope to strengthen thereby its power of doing good.

If I understand correctly the views of those who, without reference to the particular title, object in *toto* to the scheme adopted at Oxford, it is just this recognition of what is going on elsewhere against which they especially desire to protest. Their principle seems to be that, however circumstances may have changed, the University will best discharge its duty to the nation at large by pursuing its ancient course as closely as it is permitted to do; engrafting on the old studies the new sciences, as far as time will permit without sacrifice of what is more important, but confining its attention and its expectations to the direct education of the clergy and the sons of the wealthy:—a view of the matter which I once heard very powerfully propounded on high authority, but which appeared to me strangely inadequate to the demands of the occasion on which it was delivered.

I have no desire to treat such views with disrespect, especially when they lead, as they have led, devoted men to spend and be spent in their Master's service for the advancement of true religion

by increasing the means of education for those who need it ; but we cannot shut our eyes to the fact that the nation now expects more from the Universities than these views imply, and there are already some indications that the Church of England, in the Universities and elsewhere, will better secure freedom to do its own work in its own way in proportion as it ceases to ignore the work of others. If parents in various classes of society are willing to accept the judgment of the Universities on general education, it is no small matter to have it put into our hands to decide what is and what is not a good general education for young men preparing for business.

Oxford shows, by limiting the age of candidates—"qui non sunt de corpore Universitatis"—to eighteen, that it does not desire to exceed its own province and to clash with professional training, while the terms* of the statute show that it will give a large and liberal interpretation to the term General Education. It would be a very serious evil if Universities, distinguished from all others in Europe by their jealous regard for liberal education, were to adopt the Class principle in Education and stereotype the term Commercial School :—as if the Commercial Classes in England were unworthy of a liberal education, and as if, because they have to live by the market, they must also be taught by the standard of the market how to think and feel.

On the other hand, the proposal to extend the age of candidates for the title of Associate in Arts beyond eighteen has not met with any considerable favour, on the ground, it may be presumed, that, although it is only an extension of the present action of the University to take systematic measures for the improvement of schools, whether viewed as preparatory to the studies or to the business of manhood, it would be quite another matter to effect a revolution in its existing system of dealing with adults, and to accept the irregular habits and unguided reading of independent

* In Literis Anglicis, in Historiâ, in Linguis, in Mathematicâ, in Scientiis Physicis, et in ceteris artibus quae ad juventudem LIBERALITER educandam pertinent.
See p. 65.

students as an equivalent or substitute for that orderly and methodical arrangement of ideas which it is the peculiar province of an University to foster and to test.

It may, however, be reasonably expected that the proposed examinations will tend to feed the Universities with able men rather than to diminish the number of residents, because youths likely to justify the expense of University Education are more certain not to escape notice. We may be quite sure also that there are many liberal-minded and benevolent persons throughout the country who would gladly contribute to the cause of sound education by helping to maintain promising youths at the Universities if they were able to rely upon such a test, as the proposed examinations would afford, of the probability that their bounty would not be misapplied. Those who distinguish themselves in the Associate Examinations will often be drawn from a class of persons who have chiefly their own talents and industry to depend on. They will therefore be likely to succeed in open competition, and to identify themselves and their talents with the interests of the University in their future career. And this is no unimportant consideration when so many influences are operating in a contrary direction.

But, in fact, the objections under consideration refer not so much to the substance of the Oxford plan for improving the education of the Middle Classes, as to the Title it offers.

If a precedent be demanded for giving a title to youths, it is sufficient to call to mind the age at which, in former days, the title of Bachelor of Arts was conferred. With regard to the suitableness of the particular term proposed, let us first look at the facts. The University will have to set its mark on two distinct kinds of education. It will confine, as heretofore, all academical privileges to the finished education of English gentlemen, members of its own corporation, to whom it stands in relation of Alma Mater. Between itself and those outside its doors, who are not incorporated but aggregated, it proposes to establish the relation of a Clientela. In the second class, as well as in the first, will be found persons admitted to the society of gentlemen; both will

have passed such an examination as will detect the ordinary failures of uneducated men. The term Arts, as indicating general or preparatory education, has always stood in marked contrast to Sciences or Professional studies ; Association is as clearly distinguishable from Matriculation. I confess I do not see how a term more accurately in accordance with the relation in which the several classes of persons will stand to each other could have been devised. The substitutes which have been suggested fail to reflect the facts of the case, because they either imply that the state of studentship is still continuing, whereas, by the hypothesis, the early termination, and not the beginning, of the student's life is to be marked by the title ; or they wear a studied aspect of inferiority, as if the University were more jealous of the dignity of its undergraduates than ready to encourage and reward talent and diligence wherever they may be found. If the University means to give a certificate, it must be a certificate of merit, and therefore honourable and acceptable.

But it is needless to dwell on the particular force of the word used. After all, what is the peculiar significance of the term Bachelor that it should be so jealous of the contiguity of Associate ? The English are a practical people, and, as Mr. Harvey Goodwin pertinently remarks, within a few weeks after the appearance of the first A. A., the public press will assign its own estimate to the mark.

It is in fact of very little importance what the title is as long as it is a title and has a recognised value ; for a mere certificate may only lie in a drawer, and cannot be generally displayed without ostentation. The public appreciation of the title will depend partly on the standard fixed by the Examiners, which, as the University gains nothing but trouble, it has no inducement to lower, and partly on the conduct and habits of the possessors of a name which they will have a common interest in shielding from discredit.

On the one hand, the social prestige which at present attaches to residence in the Universities will clearly not belong to the Associates. On the other hand, there is little reason to fear that the title will be borne by many persons occupied in retail trade. With few exceptions, such persons enter into business at fifteen, and will

therefore appear in the class of junior candidates, to whom a certificate only will be given. If a few men engaged in the more intellectual branches of business, such as scientific instrument-making, are honourably as well as commercially associated with the interests of science, it will be a clear gain to the country ; but this circle will be a small one. Practically, the Associates will be limited to the upper middle class—to gentlemen engaged in mercantile business, in engineering, in what are sometimes called the practical branches of the legal and medical professions, or in the Fine Arts. The Memorials published in this volume, with the signatures of many of the most eminent medical men and architects, sufficiently justify the expectation that the title will be valued in the professions.*

These reasonings rest on the assumption that the true dignity of an University title is not its exclusive character. There are, I am aware, those who regard it as the privilege of a few to be conscious of a separation from the vulgar herd. I doubt this feeling being the general one. *Odi profanum vulgus* is the sentiment of a class rapidly diminishing in number, and possessing little influence over their fellow-men. Those who take a broader view of society feel that incorporation into or association with the Universities is a privilege to be valued, because it testifies to the broad human sympathies called out by a liberal education : and their influence in the world is generally wide in proportion to their sympathies. It is not by improved systems of book-keeping, nor even by neat logical or mechanical formulæ, that the Universities will help the middle ranks. Of this we may be sure, the Middle Classes understand business better than gentlemen can teach them. In one department at least, the agricultural, I can answer for the truth of this assertion with some confidence.

What they do want at the hands of the Universities is some help towards the liberal training of their faculties, moral and social, as well as intellectual.

And the most precious heritage of our acadenical foundations I apprehend to be this, that they are a perpetual memory of the human link which binds us to our less privileged brother. Not

* See p. 93.

merely does a liberal education serve as a bond between the learned professions, it also teaches us the ground of that which enables the clergyman to understand his parishioners, the country-gentleman to act with his neighbours, and the statesman to respond to the feelings of a great and free people. The time is plainly come for seeking more reciprocity in this matter, and for encouraging the middle classes to share these feelings with many who are in one sense above them, and it may be added, as a consequence, with many more who are below them.

If by the means of healthy literature the Universities can liberalise commercial education, there will be a response to many an appeal of reason or of charity, which now falls dead on minds filled only with images of the market or of sensual enjoyment. Happily the English middle classes are not wanting in domestic charities, and it is through these charities, through the opening minds and hearts of the young, that a door for more genial influences is opening ; but if that door be closed, and if these young men are allowed to grow up as hard as their fathers, with less common sense and more conceit, the upper classes in the next generation will have a more difficult task than they have yet had.

But it will be said that the plans adopted at Oxford are especially deficient in this, that they make no direct provision for the social discipline and moral training of the youths. Granted. Can it be helped at present ? It has been proposed, in the course of a recent debate at Cambridge, that the University should endeavour to associate schools, not scholars. This is a very important suggestion ; but it must not be supposed that it is made now for the first time. I pass by the signal failure of terms of union for middle schools about 1839. The best mode of dealing with independent schools was very carefully considered at Exeter last year, and the difficulties were thought to preponderate. In another publication* I have suggested some of the elements to be taken into account with reference to the social habits of the class to be dealt with, and entered into

* 'Education of the Farmer considered in connexion with that of the Middle Classes in general.' London, Ridgway ; price 1s.

calculations on the financial questions involved in any attempt to provide education as well as to test its results. I will not here go over the same ground again. But before an University undertakes to define the principle on which one school is to be taken into union and another rejected, it would be well that those who guide its deliberations should weigh carefully the experience gained by the Committee of Council in reference to the suitableness of buildings, the propriety of domestic arrangements, the competency of the teaching staff. If difficulties not easily disposed of arise between a powerful department of the Government, providing a large amount of the prime cost and annual maintenance of schools, and managing committees of voluntary subscribers, will the difficulties encountered by the University be fewer in dealing with bodies of shareholders or private individuals having a pecuniary interest at stake in establishments maintained at their own risk? The troubles which have arisen between the London University and its affiliated Colleges may offer some useful topics of inquiry on this part of the subject.

The more the relation between the Universities and the Middle Classes is considered, the more clearly it will appear that the first point to be gained is the confidence of these classes in the intellectual teaching of the Universities. That confidence (I must be allowed to say, for I have had strong evidence of the fact lately) is not yet established as regards the teaching received and habits acquired by residence in the Universities. While the training of men who read for honours is thoroughly appreciated, grave doubts are entertained as to the effects of the present line of study on the more commonplace minds, and many a father thinks that an apprenticeship served under one of his own class is a far better training for acquiring knowledge than the best social arrangements gentlemen are capable of making or guiding.

I believe, therefore, that Oxford has begun at the right end. Adopting without equivocation the principle (laid down in some remarks quoted by the public orator at Cambridge, though not applying the principle in the same way) "that almost any study thoroughly prosecuted, and with real excellence for its result, is dis-

ciplinary and in the true sense educational," it proposes to accept, to honour, and to associate any young men who come up to a certain standard of mental culture. It throws the whole responsibility for their moral discipline on their parents and on those to whom their parents intrust them.

If these lads turn out well their friends will be more disposed than heretofore to trust University men as Teachers, and to value the Institutions which made the men.

Fresh Schools and Colleges will rise up, they will shape themselves according to the natural wants of those for whom they are intended; and, confidence once established in the Teachers and in the genial hearty mode of dealing with boys taught by public school life, there will be no backwardness in supplying all that is required in the department of boarding and lodging.

I may refer in conclusion to the new programme of the Society of Arts as one encouraging result of the step taken at Oxford—a result which is the more gratifying, because the first announcement of Mr. Temple's plan called forth some indications that it was regarded as an interference with the province of that Society by some of its officers, to whose great personal exertions much of its success was undoubtedly owing. That such a feeling is not shared by the Council may be gathered from the following extract from their Programme for the ensuing year, adopted, after full inquiry and discussion, at a special general meeting of the Society:—

"The Council have read with the greatest satisfaction the Statute, recently published by the University of Oxford, for examining and granting the title of 'Associate in Arts of Oxford' to young persons not of the University. Cambridge is happily following this excellent example.

"The examinations are to be annual, independent of any denominational test, and open to all youths under 18 years of age.

"With the view of assisting to bring the proposed titles of 'Associate of Arts of Oxford,' and 'Associate of Arts of Cambridge,' within the reach of the Members of Institutes in union with this Society, the Council will grant to each youth, not less than 16 or more than 18 years of age, who shall obtain, in 1858, three of the Society's Certificates of the First Class in the subjects contained in

the Oxford and Cambridge Programmes, the sum of 5*l.* towards his expenses, if he attends at the University and undergoes the Examination there.

“ By order of the Council of the Society of Arts.

“ P. LE NEVE FOSTER,

Nov. 23, 1857.

“ Secretary.”

It should be stated, with reference to the foregoing extract, that, although no such title as ‘Associate of Arts of Cambridge’ has yet been decided on, the Syndicate, to which the subject of Middle-Class Examination had been referred at Cambridge, has been reappointed, with a view to the further consideration of the subject preparatory to a report to be presented next Term. The consideration of the Middle Class Examinations happened to come before the members of the Senate at a very inconvenient time, when they were occupied with internal questions of great importance which did not admit of postponement, but which had been previously disposed of at Oxford. In the mean time it is a great satisfaction to Oxford men to know that they will have the advantage of co-operation with Cambridge men of high distinction at Birmingham, at Leeds,* at Liverpool, and at Cheltenham; and that, if any or all of those places should be appointed as local centres of examination for the year 1858, information of the greatest value will be collected for the guidance of both Universities in their future plans.

* The following Resolutions of the Leeds Law Society, passed 11th December, are here printed as the first result of a public meeting at Leeds on the 9th December, for the consideration of the Oxford Regulations:—

“ That the Society hails with great satisfaction the measures taken by the University of Oxford for the examination of those who are not members of the University, not only as a valuable encouragement to the education of all classes, but as especially calculated to promote the highly important object of raising the general education of youths intended for the profession of attorneys and solicitors.

“ That Mr. Shaw, Mr. Bulmer, and Mr. Teale be a committee to prepare such memorial for signature, and take such other steps from time to time as may appear calculated to assist the University authorities in their application of the system to youths intended for the profession.”

It is understood that the subject of the foregoing resolutions is about to be brought under the consideration of the Incorporated Law Society and the Metropolitan and Provincial Law Association—two societies which, taken together, may be considered as fairly representing the great body of the profession of attorneys and solicitors in town and country. (See the Memorial subsequently sent, p. 95)

ORIGIN AND OBJECTS
OF
THE NEW OXFORD EXAMINATIONS
FOR THE
TITLE OF ASSOCIATE IN ARTS, &c.

THE plan of Examinations sketched out by Mr. Temple in his letters to Dr. Jeune* in April last has been fully considered by the Delegates appointed by Statute at Oxford on the 18th of June, and embodied as to all its essential features in a programme for the year 1858.

The time seems therefore to have arrived for laying before the public some information as to the steps taken in the interval, and more particularly for pointing out the lessons to be learnt from that first experiment in Devonshire, of which Mr. Temple spoke in his second letter, as nearly representing what he wished to be taken up by the University, and extended to the whole country.

Since Mr. Temple's proposal was laid before the Council, numerous memorials have been presented to the University, and much information has been collected from persons engaged in education. The examination in the West of England has actually taken place, furnishing useful data for judgment as to the future operation and scope of the regulations adopted by the University of Oxford.

The present volume contains the principal documents and correspondence relating to the Oxford Statute, and some account of the Exeter examination.

Before commenting on these papers it may be well to glance at the steps heretofore taken with a view to the improvement of education, as they bear more or less directly on the present

* See below, p. 75.

position of the classes likely to be affected by the proposed University examinations.

EXPERIENCE DERIVED FROM FORMER EFFORTS TO PROMOTE EDUCATION.

Englishmen have been engaged for the last half-century in efforts for the education of the people; the very names which have been the watchwords of party show how the question has been bound up with British and National feeling. In foreign countries either the monarch or the priest has usually obtained the exclusive direction of education; in England parental responsibility, though often slumbering and needing to be roused, has never abdicated its functions to the civil or the ecclesiastical power. The result has been, as in most English affairs, an unsystematic but sufficiently practical compromise between the traditions and habits of past times and the pressing wants of the present.

Some of us have heard from those who long ago took, and still continue to take, an active interest in the education of the poor, the history of the first systematic efforts to enable every Englishman to read his Bible and to have a Bible to read. The point especially aimed at in those days was to multiply and cheapen the means of instruction. The means adopted were such as in the present day are thought too mechanical; and doubtless soon after the establishment of schools of "mutual instruction," schools which began with vigour fell into lifeless mechanism, justifying the resistance of parents in the middle ranks to the monitorial system; but there was one thoroughly sound principle in those early systems, expressed in familiar maxims which passed current in Bell and Lancaster schools, such as "A little learnt and that little well;" "Short and easy lessons perfectly mastered." One result of these efforts at the beginning of the century was, that a large number of benevolent and patriotic noblemen and landholders, as well as some of the principal men of business in large towns, became thoroughly committed to combined efforts for the advancement of national education, and to a certain extent familiarized with the principles of action and external means, on the right application of which success depended. Among the persons so interested

there have never been wanting a large number of the most respectable members of the middle classes.

For obvious reasons the interest in Education has been of later growth among farmers than among townsmen. But fresh causes have been for some time in operation among agriculturists tending to awaken their minds to a keener sense of its importance. It would take too long to enumerate in detail all the influences which have been setting in this direction. Consequent on the rise of National and Lancasterian schools, has been a decay of independent schools in country places, at which the yeomen used to obtain a plain practical education up to a certain point, and it has become difficult for them to give their sons even as good an education as they received themselves. The evident success of public efforts in dealing with the children of the labourer, and the consequent pressure on the heels of their own class, have produced first uneasiness and after a time reflection and inquiry. Increased intercourse by means of railways, habits of business and debate at boards of guardians, bringing the squire and the parson, the tradesman and the farmer, together at the same weekly meeting, the multiplication of cheap publications, and popular lectures, have not been without their effect. But perhaps the steady growth of measures devised by the forethought of such men as Philip Pusey and the late Earl Spencer, has done most to familiarize the agricultural mind with the necessity of combining "practice with science," "working with learning." Those far-seeing men, anticipating the struggles about the food of the people, had for some years before the repeal of the Corn-laws brought together practical farmers, men of mechanical skill, and men of scientific knowledge, for a common and national object. Mr. Pusey especially, by his mode of conducting the Journal of the Royal Agricultural Society during sixteen years, taught practical and scientific men to respect each other, and stimulated among the leading members of the agricultural body a thirst for well-digested information expressed in vigorous and manly language.

This leading idea, to which the later life of that good man and his remarkable powers of mind were chiefly devoted, has been caught up by others, and has done much to prepare the way for a practical and truly English Middle-class Education. But although the want of better education, accessible to the middle ranks on easy terms, has long been felt and urged strongly on

public attention,* the attempts to supply the demand cannot be said to have been as yet very successful.

The Useful Knowledge Society and Mechanics' Institutes have not been without effect, perhaps on the whole a good effect; but they were for some time looked upon with shrinking distrust—even with intense dislike—by a large and active body of educated men, whose zeal took quite another direction for several years. Attempts were made to form Church of England Literary Societies, and Young Men's Associations on exclusive principles; of these some died a natural death in their infancy, and none can be said to have gained a strong hold on the general body of intelligent or even of seriously-minded persons.

After a time, as far as Institutions for popular lectures were concerned, Churchmen began to drop in one by one, and to find, on meeting their fellow-countrymen on open ground, that their own convictions were safe from disrespect, although they might occasionally hear equally strong convictions expressed by others with whom they could not agree. On the whole, it must be allowed that neither Christianity nor Churchmanship have suffered much by venturing to show themselves in societies of a mixed character.

But public education was not left to depend on desultory efforts and local associations. About twenty years ago measures of a more systematic kind were taken both by the Church and the State, commencing in violent conflict, but ending in an adjustment of rival claims, which, if not abstractedly the best that could have been devised, has tended to combine a larger number of active men of different religious convictions as volunteers in the work of improving their fellow-creatures than were perhaps ever united before in any country.

Public attention having been roused to the low condition of popular education, benevolent men, among whom Sir James Kay Shuttleworth must long be remembered, set themselves in earnest to devise methods by which the Government of England might take effectual care for the minds and morals of its children, as well as for the preservation of life and property. But the motives of those whom he represented were distrusted by political opponents.

* See especially the passages quoted from Dr. Arnold, Appendix, p. 99.

About the same time Gilbert Mathison paid a visit to Ireland, and made himself well acquainted with the working of the National Board of Education. On his return he printed privately a small volume containing notes of catechisings and lectures, of sermons in Roman Catholic and Protestant chapels, and stated boldly his deep conviction that the clergy had made a most unfortunate mistake in standing aloof from the Government Schools, instead of claiming for themselves the right and the duty of teaching the truth as they believed it in and through the schools aided by Parliament, under the regulations of the Board, however little to their taste those regulations might be. This book set many men thinking, and gained for the writer the confidence of persons in high station. He was known to have made great sacrifice of worldly prospects for conscience' sake; he was untiring and loveable in no common degree, and he applied himself with singular humility to induce others to act, keeping himself unknown to public fame. He roused the authorities of the Church of England to a sense of the inefficiency of their educational system, and united many of the laity in a determined effort to introduce improvements from Ireland, from Scotland, and from the Continent. It pleased God to afflict him for a short time with severe illness, brought on by intense mental efforts. The names of those who met at the author's lodging, and resolved to carry on the work of their friend during his temporary illness, may perhaps not be without interest now. They were Lord Sandon (now Earl of Harrowby), Lord Ashley (now Earl of Shaftesbury), Right Hon. W. E. Gladstone, R. S. Lutwidge, Esq. (now Commissioner of Lunacy), Winthrop Praed, Esq., Henry Nelson Coleridge, Esq., Samuel Francis Wood, Esq. (of Hickleton, Doncaster). Mr. Mathison was soon restored, and continued, till the time of his death, to devote himself to working out in detail the comprehensive idea which he originated.

The immediate result of the co-operation of his friends was the formation of Diocesan Boards over the greater part of England during the winter of 1839, and the rise of several Training Colleges in the following year. I may be excused for referring to the fact clearly shown by Chancellor Martin, that the Exeter Training College was one of the first, if not actually the first public Training School in England, in the sense in which that term is now understood—namely, an institution for the personal

education of the schoolmaster, as well as a training ground in which he may learn his art. And, without any wish to depreciate the early efforts of Sir J. K. Shuttleworth and Mr. Tuffnell at Battersea, I cannot refuse myself the pleasure of naming an institution of a similar kind on a smaller scale, established at a still earlier period on the hill of Posbury, near Crediton, in Devonshire, at the sole charge of that remarkable lady Mrs. Hippisley Tuckfield, from whose ardent zeal for the improved training of the deaf and dumb, and of schoolmasters for the poor, many received their first impressions of the need of a more living method of teaching than was current under the reign of Dr. Bell. In truth, as in every popular movement, many minds were working simultaneously and independently in the same direction.

The objects aimed at in the plans set on foot by Mr. Mathison were two-fold:—

1. The Collegiate Education of the Schoolmaster.
2. The Religious Education of the Middle Classes.

It was intended to unite these two objects wherever it might be done under the same roof; supplying the teacher from the ranks of his equals, as the clergy are supplied from the public schools and Universities. But it must be frankly confessed that the attempt on the part of the clergy and gentry to undertake the charge of schools for the families of the class next to them was a signal failure, while the education of the schoolmaster no less remarkably succeeded.

From the failure and from the success useful lessons may be drawn for our present purpose.

By the success in Training Colleges we have learned what is practicable in the education of average lads in the middle ranks; and what elements and methods of instruction are most effective in forming the minds of those who cannot go through a full course of Classical and Mathematical study.

To Mr. Derwent Coleridge especially is due the credit of having realized the aspirations of the great poet and philosopher his father, in the form of an English Education suited to the 19th century. Struggling with no ordinary difficulties, and exposed to constant misrepresentation, he has done perhaps more than any one to fulfil the requirements of the State and the

Church, without ever allowing himself or those whom he has influenced to become partisans in or for either.

The claims of Latin, of Language, and of Poetry, have been vindicated, those of Mathematics and Physical Science have been not grudgingly recognised, while their exclusive and overbearing influence has been restrained. Drawing was systematically taught at St. Mark's College by a devoted teacher, Mr. Rawlins, before the department at Marlborough House existed.* What Hullah has done for Music, not only in training schools, but also among the middle classes, it is needless for me to say.

The somewhat different methods of teaching adopted at Battersea ; at Chester, where the training school includes an engineer's workshop ; at York, where a yeoman school is attached to the training school ; at Cheltenham and other colleges, where differences of another kind prevail—not to mention female training schools,—only prove how thoroughly the training-college system has justified itself to the apprehension of men of various minds ; and how ripe we are for the extension of an analogous education to other classes.

What then are the lessons to be learned from the failure of efforts to establish middle schools, efforts in which many have been engaged, as they know to their cost ?

The first and principal fact established is the strong love of independence, and dread of interference which is so common in the families of the middle ranks.

The next is the absence of and necessity for a recognised standard of Middle-Class Education ; on this so much has been said of late in various letters,† of which some are republished in this volume, that a bare allusion is sufficient.

A third point learnt is the mischief of confounding apprenticeship‡ with education ; that is, of establishing colleges or schools to teach particular trades or arts to boys by model workshops or model farms conducted within the precincts of the teaching

* The late Mr. Butler Williams was probably the first to teach drawing in classes on a great scale in this country ; it should, also, be remembered that Mr. Dyce had been at work in the School of Design at Somerset House ; and those who are familiar with the earlier efforts to improve Sacred Music know that Drawing was not the only art in which he did good service.

† See especially Letter of Mr. Templeton, a schoolmaster, below, p. 89.

‡ See this point fully treated by the Rev. F. Temple, below, p. 49.

department. The very parents of sons destined to be farmers, engineers, or medical men, who most value education, are most forcibly alive to the fact that professional knowledge can only be acquired by what is called "seeing practice;" and that the only practice from which habits of business can be learned, must be practice carried on for its own sake as a real business, and not improvised for mere illustration in the class-room.

Therefore the proper work of the school is education; and the only useful education is that which prepares the pupil to learn and to act for himself.

The practical conclusion, then, at which we arrive is this—that the hope of the Middle Class for their children lies in providing a common test of merit open to all comers, whether from public colleges, from private schools, or from the retirement of their own chamber; and therefore that the responsibility of judging whether this standard has been attained must be vested in competent and impartial hands.

It is evident that, in the absence of some public test, the parents, a body of men habitually engaged in manufacturing, buying, and selling, are not, as a class, good judges of the merit or demerit * of the education they pay for, till (too late) they judge by the result in after life: they require professional help.

Neither are the private schoolmasters as a body in a favourable position for doing justice to themselves or each other. The attempt has been made by the College of Preceptors, but it has failed to secure the confidence even of the class whose interests it is supposed to represent.

Some have suggested a Royal Commission composed of leading manufacturers, engineers, and men of science: to this plan there are grave objections. Many of the most eminent persons in these departments are self-taught, men of strong natural genius and practical originality. Such a body of men, even if they could possibly find a principle of hearty cohesion which would satisfy the conditions requisite for mutual co-operation and for

* While these pages are passing through the press, I read the following forcible expressions in the letter of an experienced observer, himself in trade:—"This has always appeared to me the real bite of the educational question—popular shabbiness of *estimate* combined with popular inability to *appreciate*. Those who buy bread, or meat, or clothes for their boys have some tolerable judgment of the article; but, in buying instruction for them, they buy in the dark; and the most conscientious teacher has no chance against the most ignorant quack."

the confidence of a religious people, would hardly be able to administer discriminating justice to the professional labour of the schoolmaster, or to stand against a plausible demand for disproportionate attention to particular branches of knowledge.

We thus come to the Universities.

QUALIFICATIONS OF THE UNIVERSITIES FOR EXAMINING SCHOOLS.

It is needless to prove here the claims which the Universities possess to public confidence, for that confidence has been shown as a fact by the memorials which crowded the tables of their Councils before the last Long Vacation, calling on the Universities to fulfil their mission as general examining boards, no less than as educating societies. But it will not be irrelevant to state some grounds for the belief that the Universities have not hastily responded to the call, nor undertaken a task to which they are unequal.

Some of these grounds were so admirably stated by Mr. Temple, Mr. Bowstead, and Professor Max Müller,* at Exeter on the 18th June, the day on which Oxford passed the Statute which created the title of Associate in Arts, that I need only refer to their speeches.

The traditional method of study—study as distinguished from listening to lectures—the impartiality of examinations, and the experience in setting questions and judging of answers; the well-regulated habits of emulation; the modest pretension in announcing subjects of study, the strict requirement of quality in the result; the social and harmonious action of many for the honour of a great institution; the tender care for the dull and the diligent, as well as the correctives applied to desultory brilliancy: all these have long been known, and, as long as they last, will secure to the Universities the confidence of the country.

But there are one or two circumstances which conspire at the present moment to qualify the Universities in an especial manner for the new work to which they are invited.

First, as regards the foundation of all education—Religion. Their exclusiveness is taken away by Act of Parliament; but a definite faith and pure worship still remain integral parts of

* See their speeches below, p. 197 *et seq.*

their system and habits ; Oxford therefore and Cambridge can do without offence what it would be very difficult for any new institutions even to attempt—examine young men (whose friends do not object) in their understanding of the truths of revealed religion, and of the forms of public worship, without raising any new questions of principle or compromising any doctrine.

Secondly, as regards secular knowledge. Oxford in particular is in a favourable position for combining much freedom with much exactness. In former times an exclusive attachment to a limited range of subjects might have contracted the sphere of examination. But so much has been done in Oxford of late for the study of the natural sciences, that, while among her principal officers she numbers men of European celebrity as linguistic scholars, she may fearlessly challenge the world to charge her with narrowness or repugnance towards any branch of human learning which can be said with truth to have an educating tendency.

Thirdly, in a department of which I have spoken already,* and shall have to speak again presently—that of the Arts—Oxford has great advantages, not only in her ancient buildings and libraries, but in collections of more recent date, and in the strong interest felt in the subject by some, not the least active of her sons, who believe that she is capable of rendering great service to the world if only some living instruction be provided in order to make the value of her treasures known to the rising generation of future artists and patrons of art.

The last advantage to be noticed is the experience which many of her members possess of the official work of public Education going on in the various parts of the country. For the Universities consist of members non-resident as well as resident, and such a work as that now under consideration can manifestly be carried out only by the co-operation of many minds in a common spirit. The number of former Fellows of certain great Colleges in either University who are connected with the public service affords at once a pledge for the ability and common feeling which pervades those illustrious societies. If we add to these the distinguished scholars who occupy important posts in our great towns and elsewhere as masters of grammar-schools, and the number of University men connected with the administration of justice and public institutions in rural districts, it will be seen

* In the Introduction to the Exeter Papers, reprinted in the Appendix, p. 102.

at once how powerful an engine for good exists ready to hand, and how strong is the security that no private crotchet or personal interests will be allowed to disturb the action of a great body of men for the mental cultivation of a free people.

EXPERIENCE GAINED BY THE WEST OF ENGLAND EXAMINATION.

We are not entering on wholly untried ground. The experiment, large as it is, has been tried on a sufficiently extensive scale. Prizes to the amount of a hundred and twenty guineas were offered for competition to boys educated in the West of England with a view to employments in Agriculture, Arts, Manufactures, and Commerce. Above one hundred boys attended in June, 1857, at an examination which lasted four days. Most of the favourable circumstances which have been prospectively indicated above are facts in the retrospect of this Examination conducted at Exeter. The practical demand of the middle class—the desire for a real test of work among the schoolmasters to deliver them from slavery to ignorance and prejudice—the ready confidence placed in University men—the union among these, and the harmony between Oxford and Cambridge men, and, I must especially add, the help of Eminent Artists and Naturalised Foreigners—the proof afforded by the results of the examination, that not smatterings of science, but language first, then a knowledge of numbers, and of form, whether in geometry or in drawing, were the telling parts of education—the possibility of combining a plan of Scriptural examination on the basis of the Church of England, with liberty to Dissenters—all these things were plainly proved at Exeter, and are pleasant to look back upon.

Many circumstances combined to make the West of England a convenient field for trying the experiment. The geographical position of the district is favourable to concentrated action; the variety of its population—agricultural, manufacturing, maritime, and mining—relieves it from dull uniformity. The division of estates among owners and occupiers is on such a scale as to support the independence of a large number of persons both among the gentry and yeomanry, and therefore to favour spontaneous activity in various forms.

About twenty years ago several middle schools were set on foot in the western counties by members of the Church of England ; and some endowed schools have of late years been quickened, by the exertions of individuals, into considerable activity. There are also collegiate establishments in the district, founded by Dissenters, and connected with the London University. But we have no large establishment similar in its principles to King Edward's School at Birmingham or the Collegiate School at Liverpool, with systematic provision for the commercial classes. Visions of such institutions have been often talked of, but the requisite conditions for united action have been wanting. Of late, however, party-walls of separation have been gradually crumbling away, and the successful foundation and inauguration, followed by the no less successful and discreet working of the Exeter Diocesan Training College, have done wonders in the way of interesting the middle ranks in the improved methods of teaching promoted by the Committee of Council of Education.

Meanwhile another local agency has been at work ; during the last six years the towns of Taunton, Plymouth, Bath, Tiverton, Yeovil, and Newton have been successively visited by the Bath and West of England Society for the Encouragement of Agriculture, Arts, Manufactures, and Commerce, the members of which have gradually risen to above a thousand, while the visitors to its exhibitions annually exceed sixteen thousand. During the winter admirable lectures on agricultural chemistry have been delivered by Professor Voeleker. Reports on agricultural machinery, prize essays on various subjects have been distributed throughout the district in a Journal which appears to be popular, and to have awakened inquiry for further information.* The effect on the agriculture of the district may be estimated by the fact that one maker received orders for his prize chaff-cutters alone to the extent of 500*l.* at a single exhibition, and that local plough-makers and cart-makers now enter into successful competition for business with the first firms in England. But far beyond any commercial influence has been that of the brotherly and harmonious co-operation, and of the disinterested public service rendered by practical men in various ranks of society, for the purpose of promoting the success of the Society ; it has

* Published by Ridgway, vol. v., pp. 552. Price 6*s.*

broken up the hard subsoil, and mellowed the ground for the growth of kindly feelings, laying a moral foundation for union in other matters. So at least it seems to the writer, and he is grateful for the result.

During the same period, namely, since 1851, considerable activity has manifested itself in another quarter, the Society of Arts in London, producing the Exhibition of Educational Appliances at St. Martin's Hall, under the guidance of Mr. Harry Chester, and the Examinations open to Mechanics' Institutes, as explained by Dr. Booth in his pamphlet, 'What to Learn, and how to Learn.' Lord Ebrington called attention to these Examinations by his letter to Mr. Harry Chester, and, in conjunction with his excellent fellow-labourer the Rev. J. L. Brereton,* suggested a systematic county organization in the West for the distribution of prizes, providing a prize of 20*l.* at his own cost; he took at the same time the important step (all honour be to him for it) of vindicating for the Christian religion a recognised place in examinations purporting to test the results of education. These plans were promulgated at a meeting of the Bath and West of England Agricultural Society, and to a certain extent taken up by the Council.

To Lord Ebrington unquestionably belongs the credit of having concentrated public attention on two points, viz., how we may best improve the existing means of education, and stimulate self-cultivation among juvenile adults in the middle ranks. It was evident, however, that difficulties lay in the way of establishing self-constituted county boards of examination, and that the Society of Arts could not supply the required conditions for central action, nor command the confidence of the great body of educators in the country. The practical necessity for omitting one most essential element in education from the proceedings in a body constituted as that Society is, and the absence of sufficient security for the educational character of the examinations, seemed to indicate that the proper sphere of the Society of Arts might lie among adult mechanics, but does not embrace schools.

The promoters of the West of England Examination looked at

* If any one desires to see a warm-hearted effort to do good among small farmers by a mixture of practical knowledge with fun on one side, and real Christianity on the other, let them order Mr. Brereton's West Buckland Year-book, published at South Molton, but to be obtained through the publisher of this book.

first in another direction, viz., towards the Committee of Council. It needed only a successful experiment to show that the same principles which had given scope and strength to the voluntary efforts of Committees of National and British Schools might be applied to schools of a higher description ; and success would have been insured to the experiment, if success were not impossible, by entrusting its official direction to Mr. Temple, inspector of Church Training Schools, and Mr. Bowstead, inspector of Protestant Dissenting Schools. A debt of deep gratitude is due to Lord Granville and Mr. Lingen for their frank cordiality in this matter.

But although some faint hopes were entertained that the Government system might be safely expanded, so as to give to the middle classes a direct interest in the results of the training system aided by Parliament,* further consideration showed the great inconveniences which would result from such a step, and the far greater advantage to be expected from throwing the middle ranks on their own resources when once they were enabled to understand clearly the point they had to work for. The presence of Mr. Temple and Mr. Bowstead at Exeter meanwhile gave the best public pledge for the fairness with which the experiment would be tried, and of the deep interest which the Government took in the subject ; and as soon as it was far enough advanced to give materials for a judgment, Mr. Temple furnished the solution of the question, how such examinations were to be permanently conducted, by his letter to Dr. Jeune (see p. 75). What has since happened at the Universities is before the public, and may in great measure be learned from a perusal of the letters which are appended to this publication (see below).

The success of the Examination conducted at Exeter may be inferred from the fact that the candidates were supplied from schools of various descriptions, grammar-schools, colleges, and private establishments. The concurrent action of independent teachers, and the opposition of none, placed beyond doubt the fact that the want of some such public support to the intelligent teacher is actually felt. If I were at liberty to reveal some of the private communications which I received, they would melt the hearts of many by the tale which they tell of the

* See the letter addressed to the Committee of Council, below, p. 105.

hopeless discouragements and cruel parsimony of which masters are sometimes made the victims after doing their best. It was truly said, in a very powerful article on the results of the Examination in a local paper, "The root of the whole evil lies in the insane desire of the public for cheap education."

If the West may be taken as a fair sample of other parts, it is evident on the one hand there is abundant teaching power in the country; on the other, that it needs direction and support.

The results elicited by the Examination have been so well explained by Mr. Temple that at first it seemed to the writer only necessary to refer to his Report (p. 180), and to the comments on some parts of the Report contained in the letter which accompanied it.

When work is done, it seems almost idle to recount the steps by which each difficulty was removed and doubtful point cleared up; the building being erected, the scaffolding-poles should be removed, until they are wanted again for a similar purpose: so it seemed to the writer that most of the local details worked out with some care at Exeter, having served their purpose, might be forgotten, except in their fruits. But he has been reminded that, in point of fact, the work is not done, the building is not yet erected. The Exeter Examination was a model, but only a model. Oxford has taken up the plan on an extended scale, but acceptance of the plan has yet to be worked out in detail by every fresh district; and the more thoroughly practical a plan is, the more trouble is needed to bring it into full play, for at every turn it comes into contact with real living work already existing, and those who are engaged in such work have not much time or attention to spare for new plans, and are apt to turn a deaf ear to them.

I am advised, therefore, to state from the beginning the steps taken in Devonshire.

Shortly after the announcement of Lord Ebrington's prize for young farmers between the ages of eighteen and twenty-three, accidental circumstances gave the author the means of testing by actual examination the condition of more than one school frequented by boys in the middle classes, and at the same time an opportunity for estimating the effect on the minds of the boys, their parents, and their masters, of a few small prizes awarded by independent judges.

The effect was even greater than might have been expected,

especially in the interest created among the parents. It was evident that, whatever difficulties might stand in the way of subjecting youths already in business to examination, none stood in the way of school examination, provided that reasonable prudence was observed on certain points, especially the independence of private establishments, the social status of the parent, and their sacred feelings on religious subjects. The knowledge gained by personal communications with masters and with parents led to a clear understanding of the points to which they respectively attached most importance, and on these data the Prospectus and Proposals published in the Appendix were drawn up. They were first submitted to persons universally respected and likely to be well informed as to the sentiments of the laity of different shades of opinion.

It appeared that the two points requiring to be guarded within the Church were, on the one side, that the integrity of the Church of England system should be respected ; on the other, that the examination should be placed in the hands of laity as well as clergy : these two points being agreed upon, it was decided to give to Dissenting parents a pledge of entire fairness by accepting as evidence of religious teaching a certificate from any one in whom they might individually place confidence. Attempts were made from opposite quarters to induce the Committee to require one uniform and comprehensive examination in Religion. Some persons hoped by avoiding any reference to Church doctrines to take away all excuse for recognizing the Dissenting certificates ; others (not Churchmen) asked for a Scriptural examination as a means of getting rid of the Prayer-Book. But the Committee adhered to their first principle. They disclaimed all interference with the integrity of the Church examination, taking care, however, that the responsibility should be vested where it would be discreetly used, and they refused to make their own examination compulsory. The result proved the wisdom of the course pursued. The examination was satisfactory to Churchmen, and no serious complaint was made by Dissenters ; pupils from several dissenting establishments appeared ; and out of 107 boys 100 passed the examination in religious knowledge.

The proposals so matured were issued on the 23rd December to about thirty persons, including magistrates in town and country, merchants and bankers, tradesmen and farmers, with a request that they might be returned with remarks. Several im-

portant suggestions were made, but in every case except three the proposals were in substance accepted as a basis of co-operation.

Those who so far agreed formed themselves into a Committee, and, a sufficient sum of money having been immediately guaranteed for the trial of the experiment, it was decided to offer the prizes without raising discussions at a public meeting. Further details were confided to an Examination Committee, and care was taken to keep every member of the Committee, whether able to attend or not, fully informed of each step in the proceedings.

It has been stated that the Committee consisted chiefly of lay members of the Church of England: it was not exclusively a Church of England, not exclusively a lay body, but all were men of business accustomed to act with others, and none were hampered by political position or party connexions tending to check that freedom of deliberation on the merits of a case, which is essential to common action on untried ground.

The next step was a direct personal communication to all the schoolmasters in the district as far as their names were known, explaining the plans proposed and inviting them to suggest subjects and books for examination in order that the questions set might not be wide of the mark to which the attention of their pupils had been previously directed.

The Notices of the subjects for examination were issued gradually, for fear of raising unfounded alarm on the ground of their supposed extent or difficulty. The first notice produced more definite information as to what might be expected from the schools. A final notice was issued some weeks later in which reference was made to particular books, not as limiting the discretion of the teacher, but rather as pointing out the limits imposed on the examiner.

The names of candidates now began to drop in, and questions which had been earlier started had to be finally disposed of,—what candidates were admissible? were the prizes limited to schoolboys? were grammar-schoolboys admissible? what was meant by a Practical School, what by a Commercial School?

On the proposal to exclude grammar-schools, it was acutely remarked by a shrewd farmer that if the object was to improve the Middle-Class Schools it would be fatal to admit the prin-

ciple that any school was too high in the scale of society for the prizes, for that in that case the most inefficient teachers would certainly shelter themselves under the plea of their superior gentility—a remark which might, if need were, be supported by facts. However, the Committee decided to throw open their doors to private students as well as to schools, and to admit all candidates destined for “Agriculture, Arts, Manufactures, or Commerce,” all whose parents were so engaged, and all who were educated at a school commonly reputed to prepare for such pursuits.

The list of candidates soon increased, and teachers who held aloof at first were drawn into the stream. An opportunity was then given to every candidate to state precisely in what subjects or parts of subjects he was prepared to be examined—an arrangement which saved a great deal of trouble to the examiners.

As the time for the Examination drew near, the accommodation of the candidates engaged especial attention. It was found on careful inquiry that it would be impossible to quarter the boys in private houses by any systematic arrangement, and that as, in the majority of cases, masters would themselves attend the Examination with their pupils, the safest course would be to inform the candidates or their friends at what respectable inns they could find accommodation at a reasonable rate, leaving them to make the arrangement finally on their own responsibility. Further details on this subject are given in the Appendix.

The object of this narration will have been gained if it shall leave on the minds of those readers who desire the success of the University Examination a clear impression on two points:

First, that, if they wish to succeed, *they must in each district secure the hearty co-operation of parents and schoolmasters*, especially the latter.

Secondly, that, in order to secure this co-operation, *they must take a great deal of trouble to call attention to the subject*; that they must answer inquiries, satisfy scruples, and (if need be, at first) diminish expense to candidates and offer them additional inducements to seek an honour the value of which they cannot be expected to appreciate beforehand.

It will probably be desirable, in the first instance, that local prizes should be offered to be competed for within each district; local interest and local feeling (notwithstanding railways) are still very powerful in England, and it is well that it should be so.

The arrangements of the Oxford Examination are made expressly with this object in view. The successful candidates in the first division are to be placed in order of merit (a departure from the usual Oxford practice), on purpose that native talent in each district may be brought prominently forward and distinguished by special reward.

The course of careful inquiry into the wishes of the schoolmasters begun at Exeter was carried still further at Oxford by a Sub-Committee of the Delegacy elected under the authority of the statute passed in June.

During the long vacation occasion was taken to invite communications from some of the principal schoolmasters, to whom the Report of the Exeter Examination had been previously submitted, and a meeting took place in the Radcliffe Library at Oxford, at which the schools of Liverpool, Birkenhead, Leeds, Birmingham, Kidderminster, and Uppingham were well represented, as it happened, chiefly by Cambridge men. The Master of Balliol kindly came up from the country on purpose, and the Secretary and other members of the Sub-delegacy were present. Communications were at the same time received from distinguished artists and musicians.

With this knowledge of the opinions of practical men, the Regulations of the Delegacy were drawn up early in the present October Term; but before the Regulations were finally published, the Master of Pembroke, the Master of Balliol, Professor Phillips, Professor Price, Mr. Temple, and Mr. Acland, were requested to visit Cambridge, in order that they might communicate the Regulations personally to the Syndicate appointed to consider the same subject and receive their suggestions. Two members of the deputation were unfortunately prevented from attending at Cambridge, but their colleagues were most kindly received by the members of the Syndicate, which includes the Vice-Chancellor (Dr. Philpott), the Master of St. John's (Dr. Bateson), Dr. Paget, the Public Orator (Mr. Clark), Professor Selwyn, Professor Harold Browne, Mr. Harvey Goodwin, Mr. Latham, Mr. Campion, and Mr. Lightfoot. Owing partly to the Oxford practice of leaving considerable latitude in the choice of subjects to candidates in examinations, but still more owing to the proved necessity of providing for much variety in the system of the schools, and in the talents of the candidates to be expected,

the Oxford scheme had appeared at Cambridge to be too extensive and too complicated. The result of the conference was that, while the Oxford deputation had the opportunity of explaining the data on which the regulations had been framed, they received a number of valuable suggestions, most of which on the return of the deputation were adopted by the legacy. It may be hoped that the unreserved communication which has taken place will pave the way for the eventual co-operation of the two Universities, though with some difference possibly in the plans adopted by each.

COMPARISON OF THE OXFORD REGULATIONS WITH THE EXETER EXAMINATION PAPERS.

Further light may be thrown on the scope and probable operation of the Oxford Examination, by drawing attention to points in which it will differ from that conducted at Exeter.

These points of difference relate chiefly to the examination in religious knowledge, to the distinction between senior and junior candidates, and to the view taken of agriculture, arts, and manufactures, in their connexion with the education of persons destined for those pursuits.

Let us take these points in their order, premising that the Exeter scheme was throughout framed under the condition of having to attract a class to whom such a scheme was new. Hence, for example, the term "practical schools," though afterwards dropped, was devised rather for the impression it was likely to make, than for its logical accuracy, which has been called in question. The Oxford scheme, on the contrary, took its shape after public interest had been awakened, and was carefully framed on data collected from practical schoolmasters, and from the work actually done by candidates at Exeter.

Religious Knowledge.—This formed the first head of examination at Exeter, and prizes were given in this department. The examination was consequently of an extended nature, not only in the greater part of the Holy Scriptures, but also in early Church history and in the history of the Reformation. The answers of some of the candidates were far beyond the expectations of the examiners, and reflect the highest credit on their training. Candidates whose parents objected to their children being examined in religious knowledge were at liberty—and, in fact, were

required—to produce a certificate from some minister of religion in whom their parents placed confidence. To the reception of this certificate objections were expressed by many Churchmen ; and in the Oxford scheme provision is made for a single test of religious knowledge, with the option of simply declining it. It is thought that this arrangement will be even more satisfactory to Dissenters, while it relieves many clergymen from a scruple as to their obligations in reference to erroneous doctrine. It has been decided at Oxford to give no prizes or honours for religious knowledge as a distinct subject. By some it is thought that competitive examinations on sacred subjects have a bad effect on the candidates ; by others that inconveniences might result if a certificate of first-class attainments in divinity from Oxford were turned to account for very different purposes from those for which it was intended. It has also been decided that knowledge on religious subjects shall not count towards distinction in the general list of honours ; any other course would have been open to some suspicion as to its perfect fairness.

These arrangements have been adopted, not in accordance with the wishes first expressed by the teachers, but as a choice of difficulties. It cannot be too strongly impressed on public attention that it will rest with parents to require their children (assuming no conscientious scruple in the way) to give proof that they have not neglected the most important of all subjects.

Although no public credit may be earned by a display of theological attainments, and no worldly loss may be incurred by the neglect of religious study, still it is important for candidates to bear in mind that their parents will be distinctly informed by the certificate whether they have or have not satisfied the examiners in an elementary religious examination. The primary responsibility for religious training therefore is cast, where it ought to rest, on the parents, and where we may trust that it will not be lightly regarded. Nor can it be doubted that the value of the certificate in after-life will be impaired by the omission of the religious examination in the case of those who are known to have had no conscientious reason for such omission.

Distinction between Junior and Senior Candidates.— At Exeter no distinction was made between the candidates, as far as the questions were concerned ; but a difference was made as to the standard required in the answers ; and the event proved, as

was predicted by experienced schoolmasters, that clever boys of fifteen could compete with their seniors at no great disadvantage; but as soon as an adequate inducement to exertion is held out to older lads their age will tell. Moreover, it is to be expected that Oxford will attract many scholars of higher pretensions, and from a higher rank in society, than presented themselves at Exeter. It is also desirable to give a more decidedly preparatory and general character to the education of boys under fifteen than would be possible if the Exeter plan were continued, of giving to mere boys special distinction for excellence in particular subjects. A broad distinction is therefore maintained between the work of the juniors and that of the seniors, though both have to pass a Preliminary Examination in which the difference is not very strongly marked.

The general spirit of this distinction is to confine the juniors to elements, to outlines, to facts, and to allow no merit to precocious excellence in particular points except so far as it conduces to a good general result. The seniors are permitted to show knowledge above the elements; they are encouraged, and, in fact, required, to master smaller portions of subjects in detail, and to exercise their reasoning powers, as well as those of memory and observation.

In both cases much latitude of choice is left to the individual or his instructor; but the ambitious tendency of the young to diffusiveness is checked, in the case of the juniors, by limiting them to four subjects out of eight; in the case of the seniors, by specifying the subjects required for (what is called in Oxford language) a pass, and by honours being attainable only through a mastery of particular subjects.

As regards the Preliminary Examination marked I. (in the junior and senior examination), all candidates and their instructors may be earnestly exhorted to weigh well the remarks of Mr. Temple, in his Exeter Report,* as to the prevalent defects in Writing from Dictation, in English Grammar and Analysis, in Elementary Arithmetic, and in the mode of teaching Geography. They may be safely left to draw their own inferences as to the stringency with which tests, devised to meet proved defects, will be applied. In the case of the juniors especially, attention may be

* See p. 180, below.

called to the importance of clear good reading, and of good quality of handwriting, which does not mean flourishing penmanship, but something much more useful. Good handwriting, moreover, and a clean well-arranged page, have much to do with keeping an examiner in good humour.

A few illustrations will tend to exemplify the difference between the senior and junior examinations.

No junior candidate will obtain his certificate unless he can work the four first rules of Arithmetic, whatever may be his excellence in other respects. The whole subject of Arithmetic (that is, Rule of Three, Vulgar and Decimal Fractions, and their applications to practical uses) is required only of those juniors who profess to pass in Mathematics; but a similar knowledge of Arithmetic as a whole is a *sine quâ non* for all seniors.

In like manner a bare outline of English History is all that is thought suitable to the boys; and Geography is also required only in a general form. Of the seniors, without exception, a more detailed knowledge of the Map of Europe is required, and they are encouraged to produce evidence of a careful study of a particular period of history and literature, which will probably be varied another year.

In Physical Science, the attention of the boys is called, 1st, to the Elementary Mechanical Laws, and a definite form of their applications; 2ndly, to the facts of Chemistry, omitting its abstract principles (the practical power of applying those facts in simple testing being absolutely required);* 3rdly, to the simpler facts of Natural History, leaving the more complex truths of Physiology to the seniors.

The seniors are, on the other hand, led on to the general truths of Natural Philosophy; to the general principles of Chemistry; and to the laws of Organic Life in Physiology. But throughout

* Professor Brodie has kindly promised to provide uniform solutions and tests for the Chemical Examination; Dr. Acland has also undertaken that a supply of suitable objects for the Practical Examination in Physiology shall be forthcoming. Two suggestions have been made with reference to the Chemical Examination; one, that Candidates should be required to bring their own apparatus, such as test-tubes, bottles, spirit-lamp, &c.; the other, that small boxes of a uniform pattern should be provided by the University, and a charge, say, from 5s. to 10s., made to the Candidates in Chemistry to cover expenses. It would be well for those who take an interest in Chemistry to express their opinions to the Hon. Secretary.

this part of the examination, it will be observed, that security is taken against the getting up of subjects from books alone : the mechanism must have been seen, the candidate must be able to draw it ; the plant must be known at sight ; the bone must have been handled.

This principle runs throughout the examination, being the same in fact as that on which, at the public schools and Universities, composition, as well as translation, is required in Language ; problems as well as book-work, in Mathematics. - It is this principle which can alone entitle an education, in any true sense of the word, to be called "practical ;" an education, namely, which does not only fit the workman out with materials and tools, but teaches him how to use them ; and this is generally best attained by giving few tools at a time. I remember that the old carpenter, of whom my brother, Dr. Acland, speaks in 'Health, Work, and Play,' used to give us a piece of wood and a saw, saying "First learn to saw straight ; when you can do that, I will see about teaching you something else :"—not always palatable doctrine, but very wholesome.

On the subject of Mathematical training there are two opinions, both entitled to respect. One is that forcibly expressed by Dr. Whewell, in his treatise on University Education, to the effect that the exercise of the memory and the working of mere rules should be chiefly encouraged among boys, leaving the cultivation of the reason to a later age, or to the personal energy of the individual. The other is the opinion which may probably be traced to Pestalozzi, that the powers of calculation should be exercised from very early years ; that the reason of rules should be made clear before they are learned by heart.

The writer of these remarks does not venture to give a decided opinion, which he could not do without setting up his own judgment against high authority on one side or the other. The Oxford arrangement affords scope for the teacher to pursue either method, but with a leaning in favour of that method which does not leave the intellect to shift for itself. Mensuration, Practical Geometry (that is, construction without proof), and the practical use of Logarithms, may earn reward ; but a certain knowledge of Euclid will be required in all cases from juniors who offer themselves for examination in Mathematics. The reason is pre-

sumed to be this. Although it be certain, as Mr. Burchett* says, that "many more will learn *how* to do than *why* it is done," still, for one master who has vigour and elasticity of mind to teach the *how* intelligently, there are a hundred who will make such teaching mere routine, and never teach the *why* at all. Seeing, therefore, that it is impossible to enforce intelligent teaching and applications of mere practical rules, and that it is possible to enforce a knowledge of Euclid, the mastery of a small portion of geometrical reasoning is demanded from all who profess to know anything of Mathematics; and it is better to make laws for the good of the weak, than for the strong who can take care of themselves.

To the seniors considerable latitude is left in Mathematics. It is to be expected that candidates may appear in this section with a natural talent for Mathematics strongly developed by special training in some of the highest Mathematical Schools in the country. To have specified all the subjects in which such youths might be examined would have been far more high sounding than the use of the term Pure Mathematics. As the time for examination draws near, further materials for judging of what is to be expected in this Section will no doubt have presented themselves to the examiners, and, if called for, Supplementary notices can be issued.

On the subject of Language it is needless to say much; the usual routine of schools has been adhered to as closely as possible in the case of the juniors. The exercises proposed are such as to test, 1st, the knowledge of common grammatical rules; 2nd (with reference more particularly to French and German), the easy command of language for ordinary popular use. With regard to the Senior candidates the Languages are simply named; it would have been premature to specify particular books for young men whose studies have been conducted under circumstances so widely different. The Regulations do not state whether it will be open to candidates to follow the Oxford practice, of offering particular books in which they wish to be examined; but I presume that, if any such desire should exist, it will be easy for candidates to bring the subject before the

* 'Practical Geometry,' by R. Burchett.—See extracts from Mr. Lund's Introductions to 'Geometry as an Art,' and 'Geometry as a Science,' quoted below, p. 52.

Delegacy, addressing a letter to the Secretary. The somewhat unusual examination in English (Section A.) may be illustrated by a reference to the questions set at Exeter (see below, p. 148), or to the Papers* set by the Committee of Council for the Training College Examinations.

One point deserves special notice, that of *Greek*. In the scheme, as first drawn, Greek formed no part of the examination of the juniors, on the supposition that boys who were trained as classical scholars would chiefly present themselves in the higher examination; but it has since been inserted, in consequence of urgent representations from one of the largest mercantile towns. A remarkable coincidence this—one proof among many, that, while Oxford ceases to press classics to the exclusion of science, the world is finding out the real value of Language as a means of training for business.

It remains to speak of the *examination as it is connected with the practical occupations of life*. In this respect the Exeter scheme has been considerably modified. 1st, The department of the examination at Exeter, entitled, "Practical Science and Art," was treated not so much with reference to education as to the probable future occupations of the candidates—as farmers; as tradesmen; or as artists—using the latter term in a wide sense. In the Oxford scheme, Physical Science, Drawing, and Music are treated severally as branches of general education. 2ndly, Distinction in Science and Art was only to be attained at Exeter after the candidate had satisfied the previous condition of a creditable examination in Language or in Mathematics. At Oxford six subjects are proposed for distinction: the title of Associate in Arts may be conferred on those who pass in any two of those subjects, on condition that the two subjects of Drawing and Music are not selected, and all the other four omitted. Either Drawing or Music, with one of the other subjects, viz. English, Languages, Mathematics, or Science, will be accepted.

The results produced at Exeter in reply to the questions set under the heads of Agriculture and Commerce and Art were inconsiderable; such answers as were given rather indicated

* These papers are reprinted in the Monthly Paper and Church Education Directory of the National Society. Apply to the Secretary, Broad Sanctuary, Westminster.

natural or acquired habits of observation and inquiry, which might have been called out in the candidates by intercourse with their parents on the farm or in the market, than furnished any test of the results either of school-training or of individual study ; and, therefore, in an educational point of view, they were worth but little. The questions, however, served to satisfy parents that the object aimed at was to fit the boys for their calling in life. We may now with confidence expect public support to the principle asserted by the Council of the Bath and West of England Society, that “skill in business generally is best acquired by practice, and that the best preparation for practical life is a good *general education.*”

THE POSITION OF THE ARTS IN EDUCATION.

I have reserved one subject for special discussion :—the proper connexion between the Arts and General Education.

In every country which has reached an advanced state of civilization the right mode of cultivating the Arts, and of educating the designer and the workman, must sooner or later engage attention. We appear to be arrived in England at a crisis in this subject from which we must either go forward or backward.

I understand by the term Art, not merely the Fine Arts, but what are commonly called the Useful and Ornamental Arts, especially those which are in any way connected with beauty in form, colour, or sound. If we set aside those arts which relate to the provision of food, how large a proportion of the middle classes are concerned in making, buying, or selling what may minister to the sense of beauty or the reverse ! House-building, with all that it involves in the way of decoration, exterior or interior, and furniture, and the supply of clothing, must ever occupy a large portion of our population ; to say nothing of the minor arts which minister to personal ornament, or to the multiplication of the works of the artist. On merely utilitarian grounds it is of the utmost importance to the commercial position of England that she should not be outdone by foreigners in matters of such general demand. But in order to this end Art must find its place in national education by the side of Literature and Science ; if the artist is to design and the workman is

to execute, there must be a discerning public to appreciate the good and discourage the bad. The want of such discernment in their customers is beginning to be keenly felt by manufacturers who have taken pains to improve the quality of their work.

It is of paramount importance that this subject of Art should receive its due share of attention in any schemes for the promotion of Middle-Class Education, and especially that it should be recognized by the Universities in their proposed examinations; because it is a subject on which half-educated persons are peculiarly tempted to wrong, for want of balance of mind and general good sense. It is one so dependent on subjective impressions, and one on which so much arbitrary assertion passes current under the name of good taste, that it seems at times doubtful whether truth or falsehood enters into it at all, and yet to no subject does the old saying more truly apply, “Opinionum commenta delet dies; naturæ judicia confirmat.” If there are true principles involved in Art,—in other words, if Art in the sense here spoken of have a correlative science,—the University which ignores the existence of such a science will not long or successfully guide the practical intellect of the country.

Meanwhile it is evident that there are at least three parties contending in England for the mastery in the guidance of Art. The traditions of the past, and the tastes of dilettanti of various temperaments, find their expression in the Royal Academy. Influences of a different kind, to which I mean no disrespect if I apply the term *doctrinaire* (as implying a certain philosophical system and adherence to abstract principles rather than an appeal to taste alone), may be considered to be represented by Schools of Design, or rather by the Department of Science and Art; while a considerable force of irregulars make themselves felt under the somewhat erratic but intensely vigorous leadership of Mr. Ruskin and his Pre-Raphaelite allies.

I am afraid that any one who dares confess that he thinks there is much to be learned from them all, and that no one of the three can afford to despise the other, may expose himself to the charge of indistinctness of thought; but speaking in the interest of the public, and not of any particular school, I think it clear that a closer alliance between General Education and Art would tend to diminish the influence of feebleness, pedantry, or extravagance, and to secure more universal admiration of real power

and honest labour in whatever school they may be formed. For want of general sympathy between the scholar and the artist the critic often sneers, while the artist chafes under the presumed ignorance of his judge ; the fact being only that they have not learned to speak a language common to both. The remedy would seem to be twofold :—

First, To recognise Art as one branch of a liberal Education by the side of Literature and Science.

Secondly, To give the artist facilities and encouragement for the general cultivation of his own mind.

Entering into life with crude notions of possible novelties in Art, and ignorant of the laws derived from the study of great works, and from a knowledge of what can and what cannot be done with certain materials for the uses to which they are to be put, I well remember how I was made to feel the want of such knowledge before I could understand the language of those who possessed it, while they explained the limits imposed on inventive power in pictures, or windows, or metal-work. I was still more struck with the reality of the laws of Art and their connexion with classical education when my friend Mr. Newton, in the British Museum, taught me that medals and coins have a language of their own, and showed me on the map of the Mediterranean how the course of Greek civilization might be traced in the groups of cities known by their coins ; or, again, when the same gentleman at the Wilton Gallery pointed out the principles of criticism by which genuine Greek Art is to be distinguished from its spurious imitations. I could not but feel what a stream of light might be let in by such lectures upon classical studies, and upon history, ancient and modern.

The practical difficulty seems to be of two kinds. First, that the principles of Art are so vague that they are difficult to state, and still more difficult to learn except by practice ; and, secondly, that few have time both for Art and for general education—“ *Ars longa, vita brevis.* ”

These difficulties are not to be lightly disregarded ; nevertheless it may still be true—First, that a system of liberal education which ignores the principles of Art is incomplete ; Secondly, that an artist who is a mere self-taught worker would in all ordinary cases be the better for a knowledge of what others have done before him, and for instruction in the facts with which he has to deal ; in other words, that he needs Literature and Science

for the full development of the gift which Nature has implanted in him.

As to the First point.—It may be taken as now generally admitted that Literature, especially poetry, is of the first importance in the early stages of a liberal education—that it awakens power, gives vitality, and freedom, and versatility to the mind, for the absence of which, especially in those who are to act on the minds of other human beings, nothing can compensate. Secondly, that the exclusive cultivation of a literary taste, with a neglect of science, tends to a narrow fastidiousness, and robs a man of innumerable opportunities of interest in the laws of the world in which he lives and in the work of his fellow-creatures. The value of Science, both Mathematical and Physical, as a means of giving strength to the reasoning powers, accuracy and concentration of thought, and scrupulousness in the examination of evidence, will not be denied at the present day by any one who, with a desire to hand down unimpaired the work of our forefathers to future generations, has taken an interest in the expansion of the educational system of England. But while Literature fosters vitality, and Science accuracy—the one submission to great laws, the other a freedom which rises above slavery to system—it would seem that Art occupies a position between the two, and presumes, like poetry, the vital union of the imagination and the reason; and as Art manifests itself not in books, nor in systems of thought, but in works, the study of the works which great men have produced must bring a valuable contribution to a complete education. In one sense Art finds its expression in the constructive tendencies of children and in the games of boys, and so Nature calls into play invention, judgment, experience, and puts knowledge into practice; and some youths thus gain education from what they do as sailors or soldiers, or even from the activity or the failures of the cricket-field or the hunting-field, which they never gain from books or lectures. It may be a question whether any system of education which does not provide for spontaneous activity, except as an excrescence or an irregularity, can be right. Whether and in what way the practical arts can be made to bear their part in a liberal education, is another question; but clearly they must be taken into account in some form in dealing with Middle-Class Education, and therefore must not be neglected by those who undertake the responsibility of guiding it.

This, too, is certain, that Art has a history and a language; it

has also laws of its own, or at least it is subject to the laws of mind and of matter; and those who are ignorant of the Literature of Art, and of the scientific principles connected with Art, whether as paramount or subordinate to it (see Mr. Temple's Letter, below, p. 51), can have little hope of influencing the minds of workers conscious of their own inventive or constructive powers.

The hearts of thousands have been gladdened at Manchester by the liberality with which the treasures of Oxford, in private no less than in public collections, have been opened to the gaze of the multitude—treasures which were among the most instructive gems of that wonderful gathering for national education. How many more hearts would rejoice if buildings in Oxford, devoted to the custody of great works, could also be made available for the purpose of teaching the young to understand those works, under the guidance of competent interpreters!

I turn now to the Second point, the education of the artist, and of those who are to employ his talents for purposes of trade.—The chief question on which has turned the course to be taken in the New Oxford Examinations is this,—should Art enter into these Examinations simply as skill in Drawing or in Music? or should information “about Art,” its history and principles, be recognized in the Examinations? On this subject it is needless for me to say much here, as I have stated my opinion on the question more fully in a letter to Mr. Richmond which follows these remarks, and the subject is amply illustrated by the letters of my friends who have permitted me to publish their opinions in this volume.

I will only say for myself that while I recognize to the full the danger apprehended by Mr. Temple of encouraging shallow secondhand gossip “about the Arts,” I think it quite essential in the present day that the minds of young persons in the middle classes should be drawn to facts or laws in nature which make given materials unsuitable for certain uses, or for receiving certain kinds of decoration, without flagrant violations of common sense, or without shocking tastes which, if not universal, are general just in proportion to the knowledge of those who are susceptible of such tastes. I fully admit also that aesthetic criticism ought to be postponed till knowledge and experience have ripened the judgment; only let the young and the half-instructed be taught to feel that their superiors in age and education recognize the

supremacy of laws deduced from the works of great men, not as imposing fetters on inventive energy, but as a help and incentive to the truthful workers, who in each successive age have to recast in their own minds the traditions of the past and the wants of the present. For it holds good not less in Art than in religion, that the truly instructed man is he who brings out of his treasures things new and old. It is now twenty years ago since I heard one of the most accomplished and classical architects of our own generation (one to whom we were much indebted at the Exeter Examination) lay down the principle that an architecture which results from a comprehension of "the relation between the purpose to which the building is to be applied and the command which the science of our day gives us over the materials of the earth" rests on the only foundation capable of enduring when the fashion and associations of the moment shall have passed away, "because it is found resting on reason and fact."

It gives me great pleasure to be able to state, in Mr. Richmond's words, that "the very best thing that could have been done has been accomplished by Oxford" in its Regulations for that part of the Examinations which relates to the Arts.

The Regulations provide for three points:—

1. The elements of Drawing and Music (but especially Drawing) are to be encouraged, though not required, in the general education of boys under 15.
2. The practical application of Drawing to the uses of life is to be specially encouraged in youths under 18, as evinced by the importance to be attached to Mechanical, Botanical, and Anatomical Drawing.
3. The young Artist will be enabled to seek high distinction by the knowledge of the history and principles of his Art, as well as by excellence in the Art itself; but with this condition attached, that he shall pass an average examination in the branches of a common English Education, and in some one branch of Literature or Science.

I will not detain the reader by commenting on these Regulations, the grounds of which he will find so well explained in the letters which follow from the pens of Mr. Hullah, Mr. Dyce, Mr. Temple, Mr. Ruskin, and Mr. Richmond.

CORRESPONDENCE

ON THE ARTS AS A BRANCH OF EDUCATION.

*Two Letters to GEORGE RICHMOND, Esq., and JOHN HULLAH, Esq.,
on the Arts in connexion with General Education.*

DEAR RICHMOND,

Sprydoncote, Exeter, July 15th, 1857.

I AM encouraged by your kindness, shown by carefully looking over the drawings of the competitors at the Exeter Middle Class Examination, to ask you what course is, in your opinion, desirable to be taken under the recent statute at Oxford with reference to the Arts.

I include under the name of the Arts, not only the Fine Arts as commonly understood, but also the Useful and Ornamental Arts generally.

If the University Examinations of youths under eighteen obtain the confidence of the country as a test of *general education*, their operation will be very wide, embracing not only commercial schools, but grammar-schools.

The candidates may be expected to range themselves principally under three heads.

From commercial schools may be expected:—

1. Boys intended for trade and agriculture, with small capital, who go into business at or before the age of fifteen, and whose education, therefore, can only be of an elementary character.

2. Youths whose education is prolonged, with a view to qualify them for situations of trust as agents and confidential managers of business in town and country, or for the direction of larger undertakings on their own account.

From grammar-schools and the higher commercial schools we may look for a third class of a different character:—

3. Candidates who have received classical and mathematical instruction of a high order (*see* especially the Letter of Mr. Barry, of

Leeds, to me, page 88), but whose parents for various reasons do not wish them to reside at the Universities. Among them will be found many youths destined to be members of the legal and medical professions, architects, engineers, and artists in various branches, merchants, and manufacturers.

It is plain that these classes represent a large proportion of the wealth and intelligence of the country, and, which is to my present point, include the majority of those who undertake the construction and decoration of buildings, public and private, of those who decide on the persons to be so employed, and provide the funds. How important the education of these classes is I need not point out; and although it be beside the province of the Universities to judge of professional qualifications, it is strictly within their function to watch over the relation of general education to particular arts.

If it be true that the alliance of the grammatical training of the middle ranks with the scholarship and science of the Universities is likely to be of mutual advantage, can it be doubted that a similar good result might be looked for from measures tending to bring the elementary instruction in drawing and music under the cognizance of the most competent judges in those departments? How great, on the one hand, would be the gain to private families if music-masters and drawing-masters as a class were men of general education! On the other hand, how much would the nation benefit if men of liberal education generally knew enough of the objects and principles of art, to have some safer guide in their attempts to appreciate the work of the artist than their own uninstructed predilections, and the conventional fashion of the day (constituting what some call taste), or the paradoxes of some popular writer!

When we look back to the days of our boyhood and remember what then passed current, and reflect upon the effect on a portion only of the country at large of the teaching of Pugin, Eastlake, Ruskin, Owen Jones, however widely divergent their opinions; on the operation of architectural and other societies, and of schools of design; and when we consider how the impressions of every child and schoolboy are now affected by the arts of design and music, it seems truly wonderful that any one should think of passing over the subject of art in plans of education for the middle rank. Yet a strange indifference to the bearings of this question still prevails in some quarters.

It is obvious that if the subject is taken up by men of general education, in conjunction with eminent practical or professional

men, they can do more in union than separately to disseminate sound knowledge, to give honour to honest and truthful labour, to discourage trickery in performance and superficiality and conceit in criticism. With these ends in view, it would seem that two distinct subjects come naturally under consideration :—

- I. The standard of general education for the artist.
- II. The encouragement of art as one element in the education of the people in general.

In framing a system of examination which shall include these two points, I think the following are among the most important questions to which the framers must be provided with answers :—

1. Should we trust exclusively to a high standard of mental cultivation attained through literature and science as the surest and most healthy mode of promoting the execution and appreciation of good work, or should art itself be the subject of special reward and encouragement ?

2. Supposing it decided that art is to be distinctly recognised as a subject of examination, should it only be allowed to enter as one among many elements of a good general education ? or should young men, supposed to have what is called genius in art, be rewarded for excellence in their own line on the sole condition of attaining a minimum standard of preliminary general education ?

3. To whatever extent art may be admissible, should the mode of examination be confined to what young men can do, *i. e.* how well they can draw or sing ; or should they be at liberty to show what they have learned from books about art, its principles and its history ?

4. Under what head of the examination should art be ranged ? should it be grouped with literature, with mathematical or with physical science, or should it be dealt with separately ?

I should call your attention, in reference to the last point, to the fact that the duration of the examination will be necessarily limited, because the candidates will have to be gathered at one or more central points, and will incur expense ; the subjects of examination will be various, and must not clash at the same time, for fear any candidate should be shut out from any part of the examination. The examination would probably be confined within the extreme limits of Tuesday morning and Friday evening, to admit of travelling on Monday and Saturday.

You will have noticed, with reference to another point, that in

the Exeter Examinations distinction in drawing and music were only attainable by those who had passed a creditable examination in language or in mathematics, and also an elementary examination in the first principles of physical science : this last condition, however, would have been fulfilled by a moderate knowledge of the first principles of form and colour such as might be gathered from well-known elementary books.

The object aimed at by these regulations was chiefly to prevent high rewards being given to mere expertness in accomplishments, unsupported by mental training. It was also intended to call public attention to drawing and music as means of general education.

In Mr. Temple's Letter to Dr. Jeune you will observe that it is proposed to deal with architecture and drawing as elements of examination in the mathematical school, and that music altogether disappears. It is true that music is one of the faculties in which Oxford gives degrees ; but we are discussing now an examination not in a special faculty but "in Arts," which in academical language means general as distinguished from professional knowledge.

I cannot but think that if drawing is to be yoked with mathematics it will not have fair play as an avenue to distinction, on the one hand ; and, on the other, that the education of the draughtsman, as far as it may be influenced by the examination, will have a tendency to slide into a very narrow and technical groove.

When we consider how closely architecture, sculpture, painting, and music are linked with the history of the world, and how much their criticism has in common with the criticism of poetry, we cannot willingly divorce the arts from literature.

If, on the other hand, we look in the direction of physical science, it will not be denied that anatomy has ever waited on sculpture and painting ; nor that a consideration of the properties of different materials, wood, stone, metal, or any other, is in these days essential to good design. Ruskin, moreover, has taught us that the landscape-painter's attention should be directed to mineral, vegetable, fluid, and aërial forms, with greater minuteness of detail than I can venture to specify. I think we must conclude that, although geometry (and perspective too, *pace* Ruskin) are useful to the young draughtsman, some proficiency in physical science is also needed to give him full command over the material elements through which he must give expression to his own ideas or those of others. Nor can I doubt that England would be greatly the gainer if some elementary knowledge of principles of construction and ornament,

of the laws of proportion, form, and colour, were more generally diffused among persons in the middle ranks.

After much consideration of the objections to a merely theoretical acquaintance with branches of knowledge which can only be mastered by practice, I am nevertheless persuaded that examination, especially for the middle ranks, whose period of mental training is limited, may with great advantage encourage attention to physical facts in their direct relation to the arts and to manufactures, and also to principles elicited by long discussion and criticism of the works of great masters. I confess I do not quite see my way as to the best method of dealing with these subjects as independent branches of an examination; but with a desire to draw closer the link between the arts and the other branches of education, I incline to an opinion which I throw out as a suggestion for your consideration, that some acquaintance with drawing and music should be asked for in the preliminary examination of all candidates, but not absolutely required; and that excellence in either should be allowed to count towards distinction in the schools of literature and science respectively, just as marks would be gained by excellence in reading and writing.

The claims of a talent for performance in the arts might be dealt with separately in the same way as prizes and scholarships are assigned in the Universities to poems and essays, and to particular branches of knowledge apart from the examinations required for degrees; but these are matters of detail, to which I refer only that I give more form and substance to the general questions on which I desire your independent opinion.

Yours sincerely,

George Richmond, Esq.

T. D. ACLAND, JUN.

P.S.—I may be permitted to add, that the fact of your opinions not being committed in favour of any particular school, except the tried schools of truth and labour, peculiarly qualify you to form a sound judgment on the subject, and one which is likely to command the respect of educated men who desire to help others to educate themselves. (*See Mr. Richmond's Letter*, p. 60.)

DEAR HULLAH,

Sprydoncote, Exeter, July 20th, 1857.

In the hope of drawing out your views about the right way of dealing with Music in Middle-Class Education, which any one who has seen you surrounded by three or four hundred of the middle ranks on Wednesday evenings may well think worth drawing out, I send

you a copy of a letter which I have addressed to one of your colleagues in the Exeter Examination on the Arts generally.

Though Music is one of the Fine Arts, it stands on a different footing from the others. All men have need of houses to live in, and of furniture, and therefore a large proportion of the middle classes in every country town in England are necessarily engaged in supplying their neighbours with what is beautiful or ugly in form; but although, as you have observed somewhere of nurseries, either noise or music is a necessity of human existence, the laws of sound do not affect branches of trade as extensively as those of form do. Music, therefore, must be upheld on other grounds.

I have long been convinced, and I think our training-schools have clearly established it as a fact, that in the education of those who are obliged to leave school early, Music can do what nothing else can do in so short a time towards giving accuracy and refinement of mind, as well as towards encouraging certain useful and agreeable habits of alertness, steadiness, and regard for others with whom we are acting.

In fact, I believe that a youth who has learned to take his part in an old service or madrigal, must have gone through (in two years, perhaps) a course of training which, in kind, if not in degree, resembles classical and mathematical teaching, and must have learned something of the principles of good taste as distinguished from vulgar display.

What I do not see clearly is how the results of this training are to be properly tested in the examination for the title of Associate in Arts. You can thoroughly test by questions on paper the clear knowledge of what I may call the accidence of Music, viz. the understanding of keys, intervals, time, notation, &c.—you may give an excellent exercise in parsing a passage of music—you may test the comprehension of the syntax of chords and modulation—and you may even give an exercise in composition. But much remains untried without *viva voce* examination, and that seems unattainable if the examinations are to be conducted at various points simultaneously. The presence of the same examiners at each place is impossible, and the duty could not be delegated to local instructors without probable inequality, and certain suspicion of unfairness.

In all that relates to examinations for Musical Degrees the Universities would naturally be guided by the distinguished professors who preside over the Faculty of Music, but I am quite sure that the experience of one so intimately acquainted as yourself with Music

in reference to Elementary Education will be most welcome to my colleagues on the Delegacy appointed at Oxford.

Yours sincerely,

John Hullah, Esq.

T. D. ACLAND, JUN.

Letter from JOHN HULLAH, Esq.

MY DEAR ACLAND,

Betteshanger, July 31, 1857.

As those parts of your two letters which deal with general principles seem to concern Music no less than Drawing, I shall venture, before answering the questions respecting examinations which you have addressed particularly to me, to answer those which you have addressed to my colleague in reference to the "standard of general education for the artist," and "the encouragement of Art as one element in the education of the people in general." I will do this as briefly as I can.

1. To the question thus marked, I should reply that we can *not* with safety "trust exclusively to a high standard of mental cultivation attained through literature and science (*alone*) as the surest and most healthy mode of promoting the execution and appreciation of good work," and that the experiment of letting Art take care of itself has been tried long enough in this country.

For instance, our cathedrals and other ecclesiastical monuments were in the last century, as they are in this, under the charge of men who were generally supposed to have, and who very often had, a very "high standard of mental cultivation through literature," if not through science. The condition of those fabrics, up to a recent period, is notorious. The "mental cultivation" of their curators did not save many of them from utter negleet or more mischievous restoration and repair. In keeping with the condition of the fabrics was, and in many cases still is, the music heard within them—often worthless in itself, and more often unfit for its purpose, and executed in a manner which would never be tolerated in connection with any secular transaction.

2. I think that Art, being "once distinctly recognized as a subject of examination, should *only* be allowed to enter as one among many elements of a good general education." It would seem to be without the province of the proposed examinations to deal with "what is called genius in art."

3. The mode of examination in Art should certainly *not* be con-

fined to what candidates "can do;" they should be, not merely allowed, but *required* "to show what they have learned from books about Art, its principles, and its history." Surely very false estimates of works of art will often, or always, be made by those who have only a superficial acquaintance with the history of art and the biography of artists. Thus many people speak of Haydn as the inventor of certain great principles in modern *instrumentation*; because, though they *know* that he was born twenty-four years before Mozart, they do *not* know that he survived Mozart eighteen years, and produced some of his most important works after the death of that great genius.

4. It is perhaps not very important "under what head of the examinations" Art is "ranged." Eventually, perhaps, it will have to be "dealt with separately," but for the present I should like to see it "grouped with literature," with which it has a natural, though too often disregarded affinity. With "mathematical or with physical science" the Fine Arts, excepting Architecture, seem to have only that general connexion which all great subjects and means of discipline have with one another. Even that branch of physical science which seems most intimately connected with music—Acoustics—has as yet done next to nothing for the practice, or even for the theory, of music. Perhaps, however, were artists more often well-educated men, or well-educated men more often artists, these and many other seemingly antipathetical subjects might be made to co-operate with advantage.

I proceed now to deal with that one of your two letters which is more especially addressed to me; and of this it will only be necessary for me to notice especially the last paragraph but one.

As you say, much that relates to the science of music may be tested by "questions on paper"—not quite so *thoroughly* as might appear, but thoroughly enough for our present purposes. A great deal too which would be so tested, with any amount of examining force at hand, would of necessity belong to those parts of the science of music which recommend it most strongly to many as a branch of general education—those parts which, abounding as they do in nice differences, involve much exercise of the memory and the judgment. But exercise of the memory and the judgment, though fortunately incidental to the study of music, is not all that can be got out of it. I venture to think that among those "other grounds" on which, as you have well said, "music must be upheld," its influence on the affections as well as on the intellect—on the heart as well as on the

head—will one day be more fully acknowledged and more confidently put forward by those who care about education, than at present. *This species of musical influence (to return to practical matters) can only be brought to bear through studies and exercises of which paper examinations will be no test whatever : for experience proves that the most carefully framed and comprehensive “music paper” may be fairly well “done” by candidates totally devoid of skill in music as an art—who in fact, are not “musicians” at all.*

Here you must allow me to put—for the sake of answering it—a question. What is, or what do artists in music mean by, a *musician*? By a musician should, I think, be understood one who, thoroughly appreciating and understanding musical symbols, can put himself in direct communion with a musical composer without the intermediate agency of performance ; who can hear (so to speak) with his eyes ; and who, taking up a musical composition, no more requires that it be sung or played to him in order that he may form an estimate, or know the effect of it, than any well-educated man requires that a book written in a language *he* understands should be read aloud to him, before he can take in the meaning of the author.

Now, more or less of this *knowledge of the sound of what we see*, though not the end of musical study, is the indispensable means to obtain possession of such advantages and delights as music has to afford us ; until something of it is attained, the musical student has done nothing ; he is as inaccessible as ever to the genial influences of the art ; his “science” is external to himself, a possession which he will find it equally difficult and useless to retain his hold of. If this be so, an examination which takes no note of that *sympathy of eye and ear* which go to make a musician, does not touch music as *an art* at all. Some test of it is I conceive indispensable to the reality of a musical examination. I do not see the smallest difficulty in applying this test.

Let the (duplicate) examination papers be sent, as heretofore, to each centre of examination, and answered under the same surveillance as heretofore.

But to this I would add a *vivâ voce* examination, on a method * which should be suggested at head-quarters, but which should be carried out in each district by one or two of the most eminent professors within reach—probably the organist or precentor of the nearest cathedral or collegiate chapel, at any rate some person of acknowledged talent and character. The inconvenience of having from

* The plan is explained below, p. 63.

time to time to examine his own pupils might be remedied by passing them on to the next place where a like examination was being made. For the rest, I hope I am not called upon to prove that a sufficient number of examiners of this class are to be found in the country who would discharge the duty entrusted to them with judgment and fairness. By many a one it would, I am sure, be undertaken with pride and pleasure. Nor can I think that enlisting the sympathies of a very large and important body of teachers in a great national educational movement is unworthy of notice as a recommendation of my plan.

I am, very faithfully yours,

T. D. Acland, Esq.

JOHN HULLAH.

Letters from W. DYCE, Esq., R.A.

MY DEAR MR. ACLAND,

Streatham, Surrey, Aug. 27, 1857.

. . . After all, I think I shall do best by merely expressing my opinion on the points you have referred to me.

In the first place, then, I think that if you decide on recognizing Art as a subject of examination, it should *only* "be allowed to enter as one among the many elements of a good general education."

Secondly, I think that the mode of examination must adapt itself to the kind of knowledge of Art, of which you wish to test the possession.

Thirdly, I do not think that you can with propriety rank Art under the heads either of Literature or Physical and Mathematical Science; since Art has a domain of its own, essentially distinct from that of Literature and Science.

With respect to the first point, I fear you would involve yourselves in difficulties without number if you treated knowledge of Art otherwise than as matter of general education. Indeed, I do not very well see how you can go beyond this, unless, as in the case of Music, you set yourselves up as judges of professional qualifications, and grant degrees in the Arts of Design. I have no objection to this; but in that case you must elevate Architecture, Sculpture, and Painting to the rank of Music in the University system—in other words, remove them as subjects of special reward out of the sphere of the new statute. Of course I do not mean to say that the knowledge of Art, which might lie within the provinces of examination under the new statute, would be different in kind, so far as it went, from that which would be required for University degrees, supposing them to be

granted, as in the case of Music. Knowledge of Art is always knowledge of Art, however little or much of it there may be. But then there is a wide difference between that comparatively small preliminary knowledge of Art, which is sufficient for putting a man in the way to appreciate works of art, or, if the knowledge be practical, sufficient for the ordinary uses to which the power of drawing, modelling, or the like, may be put, and that profound knowledge and practical skill required for the production of works of art, and which merit special reward and distinction: just as much difference, in fact, as there is between the knowledge and skill of the poet, and the knowledge of the student, who has learned to read and write, knows something of the rules of versification, and has a good general notion of the history of poetry and the characteristics of the best poets; or, to use another illustration, between the knowledge and skill of the composer of music, and the knowledge of the student who has been taught to read music, to sing, if he has a voice, who has learned something of the rules of counterpoint, and is moderately acquainted with the history of music and the styles of composers of different schools.

I think, in short, that elementary knowledge of Art is all that you ought, as it is, in fact, all that you possibly can have it in your power, to deal with; and the question is, What are you to regard as elementary knowledge of Art? What is the kind of knowledge of which you are to test the possession?

This brings me to the second inquiry, viz., as to the form which the examinations with respect to Art are to assume.

I think the answer to this question rests practically with the authorities of Oxford. Instruction in Art, as a matter of general education, if we except a certain amount of teaching in drawing, is at present a blank in our system. To call instruction in drawing by itself instruction in art, is much the same as if we were to term instruction in reading, writing, and grammar, instruction in poetry or in rhetoric. Of course, the study of grammar is a step towards the study of poetry, just as the study of drawing is a step towards the study of painting, sculpture, or architecture. In either case there is a language which has to be mastered; but the language is not the art itself, it is only the form of it; and I cannot help thinking that if you merely content yourselves with noticing approvingly the power of drawing, when it happens to manifest itself, you will have done nothing whatever for art as art. You will only have encouraged the possession of a useful accomplishment, which by itself has

no more to do with knowledge of the arts of design than the ability to write grammatically has to do with English literature. Of course, you will not suppose me for a moment to undervalue instruction in drawing. A certain amount of skill in the use of the pencil is advantageous to every man, and to a large proportion of those who are likely to come before you as candidates for the degree of Associate in Arts must, I should think, be highly necessary. I quite admit also that a man who has undergone a course of teaching in drawing, and knows how difficult it is to acquire the power, will be in a better condition to appreciate excellency of drawing in works of art than the man who has not been so drilled. Estimating, however, at its highest, and on every ground which can be adduced, the importance of the study of drawing, I do not think that, taken by itself, you can, generally speaking, look upon ability in that line as other than an accomplishment—a special acquirement, which may be turned to account in various ways, according to the talent, the bias, or the pursuits of the possessor of it, but which, so far as knowledge of art is concerned, terminates in itself.

But even if the examinations were to take cognizance of nothing beyond the mere power of drawing, you would still have, I think, to proceed systematically. There are, as you know, several different kinds of drawing—the difference depending either on the class of objects delineated, or on the mode of delineation. For instance, machine drawing differs widely from drawing of the human figure, or, more generally, rule and compass drawing differs widely from *freehand* drawing. I do not think you can assume that ability in one kind of drawing implies ability in another. One man might be skilful in outline drawing from examples in outline, who could not draw a stroke correctly from a solid object placed before him; another might make creditable shadowed drawings from plaster casts of hands or heads, and yet be puzzled if he were required to draw a cube in perspective without the object before him, and project the shadows according to rule. What I mean to say is, that if graphic skill is to be your *ultimatum*, it will still be necessary that, in your examination papers, you should classify and distinguish properly the different kinds of ability in drawing which you are to test, and allow the candidates to choose the section or sections in which they are to be examined.

With respect to the mode by which you are to test ability of this kind, I suppose the only satisfactory way is to see the work done under the eye of the examiners; but possibly the exhibition of duly attested specimens, done elsewhere, might be reckoned sufficient.

It, however, rests, as I have said, with the authorities at Oxford to decide whether, so far as art is concerned, anything beyond a certain amount of graphic skill is to be looked for.

My own idea is, that the interests of education with respect to the arts would be best consulted by having less regard to mere skill in drawing than to general information about art. There is no question here about an artistic education, properly so called : the question is, what kind of education in art would be most beneficial to those who are not destined to artistic pursuits ? and for myself I have no hesitation in replying that, whatever other means may be adopted, the cultivation of general intelligence respecting the arts—their history, their purpose, their relations to one another, and so on, ought to hold the first place.

I should be inclined to regard the study of drawing not as a step to knowledge of this kind, but as a discipline to be gone through chiefly on account of its utility, and in many cases its necessity, in the pursuits of after life.

In taking this view, I am only proposing that you should do in this case what you do in others. If you were examining a candidate in English literature, say in poetry, you would not confine yourselves to an examination in grammar, in accent and quantity, and the rules of versification. You would, no doubt, examine on these points, but you would do more. How much more, would depend on the amount of knowledge which it was intended or expected that the examined should manifest ; but I fancy you would very speedily begin to refer to the works of poets, even in an examination of the lowest degree. I fancy you would require the analysis of some passages of the best known poems—you would want to know when such and such a poet lived—who preceded him in the kind of poetry he wrote, who followed him, and so on. And you would do this, I imagine, not because you wished to ascertain whether the examined was in the way to become a poet, but whether, as an educated man, he possessed an adequate acquaintance with the art of poetry and the works of poets ; and, *mutatis mutandis*, this, as it appears to me, is what you ought to do in the case of the Arts of Design.

The field of art is no doubt a wide one ; but a little classification, and the option allowed to the candidate of choosing the subject in art on which he was to be examined, would render simple enough that which at the first blush seems to be perplexing and difficult to deal with.

As to the place which the arts ought to occupy in your system of

examination, I think they cannot occupy any place but their own. The artist-faculty, whatever be the form in which it develops itself—whether it be in poetry and works of imagination, including the fine arts and the decorative arts, or in works of invention, including the productions of practical science—the artist-faculty has played, and still plays, so prominent a part in human history, and its nature is so special and self-sufficient, so distinct from other human powers, that I think you have no consistent course between assigning to the arts a place of their own and ignoring them altogether. You are quite at liberty to set down as much of this strong opinion to the prejudices of the artist as you like; but there will still, I think, remain the fact, that art has been, and is still, one of the great rulers of mankind, dividing the empire with religion, science, and politics; and besides you will see that I reckon Fine art as being only one of the developments of art.

If I have not explained myself with sufficient clearness on any point I have touched on, or if there are other questions on which you think I could help you, pray do not hesitate to let me know.

Yours faithfully,

T. D. Acland, Esq.

W. DYCE.

MY DEAR MR. ACLAND,

Streatham, Oct. 15, 1857.

I have read over my letter again, and do not see any reason to change the views adopted in it. What, however, I wish to say further is this: that, taking Mr. Hullah's letter, the memorial of the architects, and my own letter on the one side, and Mr. Ruskin's opinion, as I understand it from you, and that of "the other Oxford men" on the other side, you have two distinct views of the course to be taken by the University in regard to the arts—the one the view of professional men, the other the view of *non-professional* men. Now, unless I have misapprehended your description of the views of your friends, the professional views and the non-professional are at variance. *You say* we ought to give scope for the exhibition of artistic power, and reward it highly when it occurs "combined with other mental training." The *professional men say*, on the other hand, you have nothing to do with artistic power, professional qualifications, "genius in art," and so on; but with such an amount of general knowledge of art as may be acquired

either along with or independently of artistic power, and is proper to a well-educated man, and tends to the formation of a sound judgment in matters of art.

I, of course, think the professional men in the right; and you will observe that my letter to you was written and read at the Conference before I had seen Mr. Hullah's reply to your questions, and the memorial of the architects.

I notice that you give as a reason for not going beyond the testing of mere skill in drawing, that "criticism in art and its history would, for boys, be only second-hand retailing of other men's views —prejudicial to real artists, and bad training for sound judgment in general education." Surely you do not mean to imply that you ever, and on any subject whatever, expect to elicit original views from boys, even pretty old ones. So far, however, as I am concerned, I imagined there was a middle course between testing the graphic powers of the candidates and plunging them at once into the wide and foggy sea of art-criticism. I thought that, avoiding all debatable ground, there was still a pretty extensive domain of general and preliminary information respecting the arts, which the University might, with great advantage to the interests of art, encourage candidates to cultivate; and the cultivation of which, to my mind, would not only not be prejudicial to real artists, but would be the best commencement of a healthy training of the judgment for all, whether for the future artist or amateur.

Putting my notion in a practical form, it is this: that the exhibition of graphic power should be chiefly confined to the examination of the Junior class, leaving it optional with the Seniors in the second examination to exhibit proofs of further progress in that line; but making the higher examination, as a rule, refer, not to what the candidates can *do in the arts*, but to what they *know about them*, their history, their several objects, and their relations to one another and to science.

Yours faithfully,

T. D. Acland, Esq.

W. DYCE.

MY DEAR MR. ACLAND,

Streatham, Oct. 24, 1857.

I am glad to learn from your note of the 22nd that the examination scheme is coming to maturity.

As to that part of it which concerns the Arts, I think it will do

well enough if Section E be termed "Arts of Design" instead of "Drawing," or, as you afterwards write it, "Drawing and Architecture." As the scheme stands at present, you make the "History and Principles of the Arts of Design" to stand under the general heading of "Drawing and Architecture," an arrangement which, I confess, does not satisfy me. The Arts of Design include drawing; but drawing only includes itself and its species. Architecture is not a species of drawing. What we term an architectural drawing is not a work of architecture, but only a *picture of it*. Drawing, in short, is not an essential part of architecture, nor is it of sculpture: though both architects and sculptors make drawings of their future works for convenience' sake, and accordingly the study of drawing forms part of their education; but, so far as they study drawing, they are studying the art of painting, which essentially includes all species of drawing. My idea is, that Section E ought to be named "Arts of Design," and so have the same general character as the other sections. For observe, you term Section F "Music," not "singing" or "playing on instruments;" and so Section D is "Science," not a particular branch of it. Section E then being termed "Arts of Design," you would come to your subdivisions included under the general heading. These subdivisions would range themselves under the heads of Practical and Theoretical—much as you have set them down.

Practical—

1. *Drawing and modelling*, and, if you choose, *painting*. These three processes are common to painters and architects. The two former only are required by sculptors.
2. Design.

Theoretical—

3. History and principles of the arts.

I am not sure that I understand what is implied in your second head of "Design;" but I imagine that what you intend might be included under the first head, as I do not suppose you expect to obtain specimens of original design.

I see you include machine-drawing and botanical under C and D. Perhaps you might add to D anatomical drawing, and to C engineering-drawing. By the latter I mean drawing of works, in which the merely necessary and unadorned constructions are employed, and which belong to practical science rather than to architecture.

Of course, I do not think that a perfect arrangement is possible—

not even in theory—for the same branches must occur in more than one section even to be theoretically accurate. The chief point is to secure that the general divisions shall with propriety include all the subdivisions; in what section the examinations in particular subdivisions shall take place must be dictated by convenience.

Yours faithfully,

T. D. Acland, Esq.

W. DYCE.

It has occurred to me that you might add “drawing of architectural ornament” to your section of architectural drawing (drawing of plans and elevations).

*Extracts from Letters from REV. F. TEMPLE.**

MY DEAR ACLAND,

S, Royal Crescent, Oct. 20, 1857.

WHEN I threatened fight, you must not suppose I meant more than a battle of details. Practical men are, in reality, agreed on most matters of principle, unless they are either dishonest or very narrow-minded.

Now, I will draw up an indictment against you.

1. You are infected with the prevalent heresy of the day, which wants school to be a substitute for apprenticeship. The thing is simply impossible. You may make apprenticeship a substitute (a very poor substitute) for school; but the inverse substitution will invariably fail, sooner or later. Now, I find this heresy in your distinction between the upper and middle classes. You say that the latter are to be practical in a sense in which the former are not, and that they must be educated in a practical way accordingly. Now, this I entirely disagree with. No education is, in reality, or ought to be, more practical than that which is given to the upper classes. The metaphysics in Oxford are, perhaps, and only perhaps, an exception to this assertion; but everything else, both at Oxford and Cambridge, is practical in the very highest sense. And though you

* Mr. Temple's kindness has permitted me to print the portions above given of two of his letters, written with the unrestrained freedom of private friendship; but the views they contain appear to me so valuable, and to bear so directly on the object of the present publication, that I am unwilling to deprive others of the pleasure of reading them.

want accurate thinkers from Oxford, you want also doers, and you get them. But the upper classes do not try to push back apprenticeship into school ; they do not make the barrister learn his law at Oxford, nor the physician his medicine. The middle classes do ; and very mischievous it is. A certain amount of adaptation of the school-work to the apprenticeship which is to follow, is possible and useful ; but that adaptation has its limits. The predominant idea of good education must be to make *men*, not to make *engineers*, or *artists*, or any other specialty ; subordinate to this you may introduce much, but it must be subordinate, or it becomes mischievous.

2. You do not recognize the value of *growth*. You want to *make* a system of education for the middle classes. In spite of the fact that none of your Exeter boys could touch your Art paper, you want a special school for the subject. Who is to teach this Art ? Where are your masters ? Surely you know that what we shall get at present from these schools, in the way either of History or Criticism, will be valueless. Depend upon it, if Art is wanted, Art will come : create the taste, and the demand will follow, and then the supply to that demand. It is politically absurd to begin by creating the supply. The way in which some of your friends talk about education seems to me to rest on the hypothesis that you may teach the middle classes, or indeed any classes, what you please. Nothing can be a greater mistake. Education, to be worth anything, must follow precisely the same laws as trade or legislation, or any other fruit of human intercourse. Improvements in education must grow partly out of EXISTING methods, partly out of FELT needs ; they can never come out of thinkers' brains except by passing through the last-named source.

But if in any way you can (and I really think the thing can and will be done, nay, by help of Ruskin and Co., is being done) create a taste, there is no doubt whatever about the result. Then will come Art in your Middle Class Schools, great Schools of Art in our towns, and a Professor of Art at Oxford.

I have written a long memorandum on the whole matter for the sub-delegacy, and have asked for a meeting on the 16th.

In that memorandum I have assigned to Art as high a place as I dare. I doubt whether it would not be better to have an examina-

tion in Drawing for the juniors, and in Drawing and Colouring for the seniors, and put a D after the name of every one who did well ; and the same for Music. But I have proposed a class list in each, as you seem to wish it so much. I have not proposed a "School" of the Arts, which seems to me ambitious and unmeaning. A First-class in Music is intelligible ; a First-class in "the Arts," as at present we have them, is totally unintelligible.

Yours ever,

T. D. Acland, Esq.

F. TEMPLE.

[To the indictment contained in the preceding letter I pleaded, on the first count, 'not guilty,' and called evidence to character to prove that I had never kept company with model farms, model workshops, common things, and other well-intentioned plans for making schoolmasters jacks of all trades, and the boys masters of none.

On the second count, admitting the importance of growth in living ideas, I entered a demurrer on a general principle, with a view to justify my assertion, that a knowledge of the principles of the Arts is, for certain persons at least, an important instrument of mental training, the use of which ought to be actively encouraged. What I meant by principles I have endeavoured to explain in the earlier part of this volume.

But it matters little to the reader what I said, except that it drew forth the following letter :—]

MY DEAR ACLAND,

London, Oct. 8th, 1857.

You are freer from the great heresy than I had believed. But I see, or (forgive my arrogance) I think I see that you are in the meshes of a different snare. You are forgetting the great distinction between the mechanical and liberal arts.

The mechanical arts are subordinate to their sciences. The sciences here are absolute and rule with a despotic sway, and the highest aim of the art is to attain to the perfection of the science. A machine which could get rid of friction, a chemical preparation which should get rid of impurity, would be the perfect results of the arts of mechanism and of chemistry.

The liberal arts, on the contrary, are supreme over their sciences. The sciences here, so far from being absolute, are always tentative, and their perfection is to come up to the level of their arts. Instead

of the rules being despotic, the great artist usually proves his greatness by rightly setting aside rules; and the great critic is he who, while he knows the rule, can appreciate that "law within the law" which overrides the rule. In no other way does Ruskin so fully show his greatness in criticism, as in that fine inconsistency for which he has been so often attacked by men who do not see the real consistency that lies beneath.

Now in education the distinction between these two species of art arises from the fact, that in each case the governing must precede the governed; it may be much, it may be little, but if the education is to be *good* the governing subject must precede the governed. So mathematics must precede engineering, surveying, navigation. But, on the other hand, speech must precede grammar; singing or playing, thorough bass; drawing, criticism of arts of design.

Moreover, there is this further distinction, that you may teach the mechanical arts *along* with their sciences; the principle, and *some part* of the application, may go together, the principle indeed must be insisted on much more than the application, but, to a certain very small extent, we may give both together, and it is best to do so. The science is in all cases the ideal; the art the real. The real is much more rapidly and tenaciously seized than the ideal by a learner. The real, therefore, may begin very soon; and in cases where by right of supremacy the ideal ought to precede, the real may follow almost *pari passu*. But still the rule holds, and all intelligent teaching of a mechanical art depends on the science thereof having been taught in its proper place.*

* The connexion between Art and Science may be illustrated by the following extracts from Mr. Lund's works on Geometry as an Art and as a Science:—

"I cannot discover any good reason why the mensuration taught in our schools should be built, as it mostly is, upon no foundation but the *memory* only. I think it need not, and I am sure it ought not, to be so. But as it is, we reap the fruits of this bad system of mental culture in the very general ignorance of *right principles* of construction and design, which notoriously prevails among *English* artists and workmen. Public attention has been lately directed to the necessity of removing this stigma from our character as a people by the institution of *Schools of Design* and *Practical Art*. Let me urge upon the managers of such schools the expediency of beginning their work at the *right end*. Let *principles* be taught before *rules*; let *Geometry as an Art* be systematically preceded by *Geometry as a Science*. Then, but not till then, we may hope to see the desired result in the improved taste and skill of our designers, and to be saved the continuance of that sense of humiliation which every Englishman must experience on reading the statement here subjoined.

"On a late public occasion, at the inauguration of one of these schools, the Duke of Argyle remarked that 'a very large proportion of the works of art preparing

With the liberal arts it is absolutely necessary for thorough education that the art should precede, and a long way precede the science. Till a child can talk pretty fluently and correctly it is hopeless to teach grammar. Speech is the earliest of all arts, and of THESE sciences grammar is the earliest science. Music is probably the next art in order of time, and the science accordingly can be entered into by youths, and they can go far enough to make it worth while to examine them at the age of 17. Drawing is unquestionably a later art than music, and the science thereof is still later. And I do not believe that any one (not a genius) can make such progress in this science by that age, as to make it worth while to examine him.

What is the result of neglecting this and teaching the science of a liberal art too early?—Mannerism.

A science is a powerful thing, and grasps even strong minds with a force such as an art does not acquire in twice or thrice the time. The inevitable result of giving the science before the art has formed the taste, is to cramp the taste into a mould and make it mechanical. There is nothing so fatal to any art of this kind as to make the FEELING so subordinate to the (so called) PRINCIPLES that the learner shall slip into the propensity of admiring what does not please him: yet this is the consequence of drilling him in principles too early.

It is from this source that has come all that painful reproduction which has done more to spoil the revival of true Gothic than

for the Crystal Palace are being executed almost entirely by *foreign* artists, and that our manufacturers have also been obliged to send *abroad* for designs.” . . .

“ Hitherto the practice has been, for the most part, in this country to teach the Science to one class, and the Art to another; so that, whilst the students of our Universities have cared little for the Art, the pupils of our commercial schools have cared less for the Science. It seemed to me that this divorce of practice and theory was both unsatisfactory and unnecessary, and that no good reason can be alleged why either the University student’s excellent knowledge should fail, as it has done, to fix a distinct impress upon practical Art; or the artisan’s skilled workmanship be constantly marred by the violence done to the true principles of Science. My intention has been, therefore, to do something towards bringing Art and Science together again, so far as to make them better friends; not by jumbling the two together, but by assigning to each its distinct duty, and so placing them that they *must* mutually assist each other. . . . How far I may be able in the prosecution of my design to effect a breach in the present style of popular education, fortified as it is by custom and prejudice, I know not; but perhaps it may provoke some educators at least to a wholesome jealousy to be told that for every book published in England during the last twenty years, *combining Art and Science for the use of the middle class and artisans*, not less, I believe, than twenty such books have been published both in France and Germany.”

anything else. What can be more annoying than to hear (as you constantly hear) this admired as "correct," and that condemned as "incorrect?"

This is the pedantry which called Shakspeare an irregular genius, and would have excluded him from the list of great dramatists, because, forsooth, he did not keep the unities. You want to teach young artists that there are principles in their art. Teach them also that the principles cannot be expressed in words, and that until they have learnt to use the words as indicating something more and something deeper than they say, the principles have not been mastered at all. Can you get them far enough by 17 to secure that they shall *feel* this? I do not believe it.

This is my reason (and the more you think of it the more you will approve it) for being unwilling that the *science* of music, and still more that of drawing, should be used as the instrument for teaching young minds to think.

I am ruthlessly spoiling your holiday. Good bye till the 16th.
Is not Ruskin's letter beautiful?

Yours ever,

T. D. Acland, Esq.

F. TEMPLE.

[The following are the principal parts of Mr. Ruskin's letter referred to by Mr. Temple. It was written in reply to a clear statement of certain points in debate between Mr. Temple and me, drawn up by Mr. Temple, but not in a form suitable for publication, and some references to it are therefore omitted.]

Extracts from a Letter of JOHN RUSKIN, Esq., to REV. F. TEMPLE.

MY DEAR SIR,

Penrith, Sept. 25, 1857.

I have just received your most interesting letter, and will try to answer as shortly as I can, saying nothing of what I feel, and what you must well know I should feel, respecting the difficulty of the questions and their importance; except only this, that I should not have had the boldness to answer your letter by return of post, unless, in consequence of conversations on this subject with Mr. Acland and Dr. Acland two months ago, I had been lately thinking of it more than of any other.

Your questions fall under two heads: (1.) The range which an

art-examination can take. (2.) The connexion in which it should be placed with other examinations.

I think the art-examination should have three objects.

(1.) To put the happiness and knowledge which the study of art conveys within the conception of the youth, so that he may in after-life pursue them, if he has the gift.

(2.) To enforce, as far as possible, such knowledge of art among those who are likely to become its patrons or the guardians of its works, as may enable them usefully to fulfil those duties.

(3.) To distinguish pre-eminent gift for the production of works of art, so as to get hold of all the good artistical faculty born in the country, and leave no Giotto lost among hill-shepherds.

In order to accomplish the first object, I think that, according to Mr. Acland's proposal,* preliminary knowledge of drawing and music should be asked for, in connexion with writing and arithmetic; but not, in the preliminary examination, made to count towards distinction in other schools. I think drawing is a necessary means of the expression of certain facts of form, and means of acquaintance with them, as arithmetic is the means of acquaintance with facts of number. I think the facts which an elementary knowledge of drawing enables a man to observe and note, are often of as much importance to him as those which he can describe in words or calculate in numbers. And I think the cases in which mental deficiency would prevent the acquirement of a serviceable power of drawing would be found as rare as those in which no progress could be made in arithmetic. I would not desire this elementary knowledge to extend far, but the limits which I would propose are not here in question. While I feel the force of all the admirable observations of Mr. Hullah on the use of the study of music, I imagine that the cases of physical incapacity of distinguishing sounds would be too frequent to admit of musical knowledge being made a *requirement*; I would *ask* for it, in Mr. Acland's sense; but the drawing might, I think, be required, as arithmetic would be.

2. To accomplish the second object is the main difficulty. Touching which I venture positively to state—

First. That sound criticism of art is impossible to young men, for it consists principally, and in a far more exclusive sense than has yet been felt, in the recognition of the facts represented by the

* See Letter to G. Richmond, Esq., p. 33.

art. A great artist represents many and abstruse facts; it is necessary, in order to judge of his works, that all those facts should be experimentally (not by hearsay) known to the observer: whose recognition of them constitutes his approving judgment. A young man *cannot* know them.

Criticism of art by young men must, therefore, consist either in the more or less apt retailing and application of received opinions, or in a more or less immediate and dexterous use of the knowledge they already possess, so as to be able to assert of given works of art that they are true up to a certain point; the probability being then that they are true farther than the young man sees.

The first kind of criticism is, in general, useless, if not harmful; the second is that which the youths will employ who are capable of becoming critics in after years.

Secondly. All criticism of art, at whatever period of life, must be partial; warped more or less by the feelings of the person endeavouring to judge. Certain merits of art (as energy, for instance) are pleasant only to certain temperaments; and certain tendencies of art (as, for instance, to religious sentiment) can only be sympathised with by one order of minds. It is almost impossible to conceive of any mode of examination which would set the students on anything like equitable footing in such respects, but their sensibility to art may be generally tested.

Thirdly. The history of art, or the study, in your accurate words, "*about* the subject," is in no wise directly connected with the studies which promote or detect art-capacity or art-judgment. It is quite possible to acquire the most extensive and useful knowledge of the forms of art existing in different ages and among different nations, without thereby acquiring any power whatsoever of determining respecting any of them (much less respecting a modern work of art) whether it is good or bad.

These three facts being so, we had perhaps best consider, first, what direction the art-studies of the youth should take, as that will at once regulate the mode of examination.

First. He should be encouraged to carry forward the practical power of drawing he has acquired in the elementary school. This should be done chiefly by using that power as a help in other work; precision of touch should be cultivated by map-drawing in his geography class; taste in form by flower-drawing in the botanical schools; and bone and limb drawing in the physiological schools. His art, kept thus to practical service, will always be right as

far as it goes ; there will be no affectation or shallowness in it. The work of the drawing-master would be at first little more than the exhibition of the best means and enforcement of the most perfect results in the collateral studies of form.

Secondly. His critical power should be developed by the presence around him of the best models, *into the excellence of which his knowledge permits him to enter*. He should be encouraged above all things to form and express judgment of his own ; not as if his judgment were of any importance as related to the excellence of the thing, but that both his master and he may know precisely in what state his mind is. He should be told of an Albert Durer engraving, “ That is good, whether you like it or not ; but be sure to determine *whether* you do or do not, and why.” All formal expressions of reasons for opinion, such as a boy could catch up and repeat, should be withheld like poison ; and all models which are too good for him should be kept out of his way. Contemplation of works of art without understanding them jades the faculties and enslaves the intelligence. A Rembrandt etching is a better example to a boy than a finished Titian, and a cast from a leaf than one of the Elgin marbles.

Thirdly. I would no more involve the art-schools in the study of the history of art than surgical schools in that of the history of surgery. But a general idea of the influence of art on the human mind ought to be given by the study of history in the historical schools ; the effect of a picture, and power of a painter, being examined just as carefully (in relation to its extent) as the effect of a battle and the power of a general. History, in its full sense, involves subordinate knowledge of all that influences the acts of mankind ; it has hardly yet been written at all, owing to the want of such subordinate knowledge in the historians ; it has been confined either to the relation of events by eye-witnesses (the only valuable form of it) or the more or less ingenious collation of such relations. And it is especially desirable to give history a more archæological range at this period, so that the class of manufactures produced by a city at a given date should be made of more importance in the student’s mind than the humours of the factions that governed, or details of the accidents that preserved it, because every day renders the destruction of historical memorials more complete in Europe owing to the total want of interest in them felt by its upper and middle classes.

Fourthly. Where the faculty for art was special, it ought to be carried forward to the study of design, first in practical application

to manufacture, then in higher branches of composition. The general principles of the application of art to manufacture should be explained in all cases, whether of special or limited faculty. Under this head we may at once get rid of the third question stated in the first page—how to detect special gift. The power of drawing from a given form accurately would not be enough to prove this; the additional power of design, with that of eye for colour, which would be tested in the class concerned with manufacture, would justify the master in advising and encouraging the youth to undertake special pursuit of art as an object of life.

It seems easy, on the supposition of such a course of study, to conceive a mode of examination which would test relative excellence. I cannot suggest the kind of questions which ought to be put to the class occupied with sculpture; but in my own business of painting I should put, in general, such tasks and questions as these:—

- (1.) "Sketch such and such an object" (given a difficult one, as a bird, complicated piece of drapery, or foliage) "as completely as you can in light and shade in half an hour."
- (2.) "Finish such and such a portion of it" (given a very small portion) "as perfectly as you can, irrespective of time."
- (3.) "Sketch it in colour in half an hour."
- (4.) "Design an ornament for a given place and purpose."
- (5.) "Sketch a picture of a given historical event in pen and ink."
- (6.) "Sketch it in colours."
- (7.) "Name the picture you were most interested in in the Royal Academy Exhibition of this year. State in writing what you suppose to be its principal merits—faults—the reasons of the *interest* you took in it."

I think it is only the fourth of these questions which would admit of much change; and the seventh in the name of the exhibition; the question being asked, without previous knowledge by the students, respecting some *one* of four or five given exhibitions which should be visited before the Examination.

This being my general notion of what an Art-Examination should be, the second great question remains of the division of Schools and connexion of studies.

Now I have not yet considered—I have not, indeed, knowledge enough to enable me to consider—what the practical convenience or

results of given arrangements would be. But the logical and harmonious arrangement is surely a simple one ; and it seems to me as if it would not be inconvenient, namely (requiring elementary drawing with arithmetic in the preliminary Examination), that there should then be three advanced schools :—

- A. The School of Literature (occupied chiefly in the study of human emotion and history).
- B. The School of Science (occupied chiefly in the study of external facts and existences of constant kind).
- C. The School of Art (occupied in the development of active and productive human faculties).

In the School A, I would include Composition in all languages, Poetry, History, Archæology, Ethics.

In the School B, Mathematics, Political Economy, the Physical Sciences (including Geography and Medicine).

In the School C, Painting, Sculpture, including Architecture, Agriculture, Manufacture, War, Music, Bodily Exercises (Navigation in seaport schools), including laws of health.

I should require for a first-class, proficiency in two schools ; not, of course in all the subjects of each chosen school, but in a well chosen and combined group of them. Thus, I should call a very good first-class man one who had got some such range of subjects, and such proficiency in each, as this :—

English, Greek, and Mediaeval-Italian Literature.	High.
English and French History, and Archæology.	Average.
Conic Sections.	Thorough, as far as learnt.
Political Economy.	Thorough, as far as learnt.
Botany, or Chemistry, or Physiology.	High.
Painting.	Average.
Music.	Average.
Bodily Exercises.	High.

I have written you a sadly long letter, but I could not manage to get it shorter.

Believe me, my dear Sir,

Very faithfully and respectfully yours,

Rev. F. Temple.

J. RUSKIN.

Perhaps I had better add what to you, but not to every one who considers such a scheme of education, would be palpable,—that the main value of it would be brought out by judicious involution of its

studies. This, for instance, would be the kind of Examination Paper I should hope for in the Botanical Class:—

1. State the habit of such and such a plant.
2. Sketch its leaf and a portion of its ramification (memory).
3. Explain the mathematical laws of its growth and structure.
4. Give the composition of its juices in different seasons.
5. Its uses? Its relations to other families of plants and conceivable uses beyond those known.
6. Its commercial value in London? Mode of cultivation?
7. Its mythological meaning? The commonest or most beautiful fables respecting it?
8. Quote any important references to it by great poets.
9. Time of its introduction?
10. Describe its consequent influence on civilization?

Of all these ten questions there is not one which does not test the student in other studies than botany. Thus, 1, Geography; 2, Drawing; 3, Mathematics; 4, 5, Chemistry; 6, Political Economy; 7, 8, 9, 10, Literature.

Of course the plants required to be thus studied could be but few, and would rationally be chosen from the most useful of foreign plants, and those common and indigenous in England. All sciences should, I think, be taught more for the sake of their facts, and less for that of their system than heretofore. Comprehensive and connected views are impossible to most men; the systems they learn are nothing but skeletons to them; but nearly all men can understand the relations of a few facts bearing on daily business, and to be exemplified in common substances. And science will soon be so vast that the most comprehensive men will still be narrow, and we shall see the fitness of rather teaching our youth to concentrate their general intelligence highly on given points than scatter it towards an infinite horizon from which they can fetch nothing, and to which they can carry nothing.

Letter from G. RICHMOND, Esq.

DEAR ACLAND,

Encombe, Wareham, November 23, 1857.

I have read all the papers which you sent me with very great interest and attention, and, as far as I am able to judge, I think the very best thing that could have been done by Oxford to further a

knowledge of Art, is accomplished by treating Drawing and Music as branches of general education, and obliging those candidates for the title of Associate in Arts, who may exhibit even extraordinary power either in music or drawing to give evidence that they have not neglected all the other parts of a sound liberal education.

Hitherto as far as I know the arts of design have been wholly unrecognised by the Universities, and if so, the step now taken is a great one—because it is the first, and will not, I think, be the last. And after all your interest and labour in the subject, you must feel it as a great reward, that something has been done towards accomplishing that which is so beautifully expressed by Ruskin as a first object of the Art-Examination :—"To put the happiness and knowledge which the study of Art conveys, within the conception of the youth, so that he may in after life pursue them if he has the gift."

I had some expectation of being able to pass a day or two at Killerton this week, but I am sorry to say I must give up the hope, as I am detained here longer than I expected, and have pressing reasons for returning to town the moment I leave this.

I remain, dear Acland,
Yours very faithfully,

G. RICHMOND.

P.S. You see I have availed myself of your permission to write shortly. If it is necessary to say anything of my opinion, I wish it to be known that what has been done has my hearty concurrence.

ON MUSICAL EXAMINATION.

THE following suggestions from Mr. Hullah appear to me so important in their bearing on the whole principle of "Practical Education," which runs through our Oxford scheme, that I must put my imperturbable as well as indefatigable printer and myself to some inconvenience to insert them at the last moment.

It must be remembered that Mr. Hullah has the best title to be listened to on Music as a *branch of General Education*. He has made it so in England. He has delivered and printed more than one lecture on the right use of Music as an instrument in

mental training, assuming as his starting point that *language is the great instrument* by which minds are to be formed. He contends (to adopt Mr. Temple's useful distinction) that the multitude of subjects which people are trying to introduce into schools, however useful as apprenticeship, have no office whatever in Education. Whereas Music in the way it is commonly taught belongs neither to apprenticeship nor Education; but is in fact, like a smattering of language, or any other smattering, a mere trick.

It would not be difficult to show that Music as taught in Mr. Hullah's classes is an instrument of moral as well as of intellectual training;* but to give to Music its full effect in the instruction of the middle ranks, it is most important that the examination should be as far as possible practical.

Letter from MR. HULLAH.

MY DEAR ACLAND,

St. Martin's Hall, Nov. 30, 1857.

I send you herewith a paper of directions for testing the power of Candidates for musical honours in *recognising musical sounds*. It is needless for me to say more than I have done already in respect to the absolute necessity of some test of this kind. I have thought much on the matter since I last wrote to you, and moreover tried several experiments (in the Training Schools and elsewhere) with a view to ascertaining *what amount* of "sympathy of eye and ear" might reasonably be expected of those with whom Music had been an incidental, and not a special, subject of study, and how this amount could best be estimated. The accompanying paper or scheme is the result.

I see that, in his letter to Mr. Temple, Mr. Ruskin expresses a doubt as to the propriety "of musical knowledge being made a *requirement*" in the proposed examinations, not because he undervalues Music as an accomplishment or as a means of discipline, but because of the frequency of "cases of physical incapacity of distinguishing sounds." Mr. Ruskin puts his objection with all the diffidence of a man profoundly versed in one art, writing about

* On this subject I beg to refer especially to Mr. Hawtrey's experience at Windsor, quoted from a private account, by his leave, in my 'Essay on the Education of the Farmer.' Ridgway, price 1s.

another to which he has given little attention ; he “ *imagines*” only the difficulty to which he alludes. I cannot deal better with this imagination of his (and of many other people) than by using his own words—merely substituting Music for Drawing. “ I think the cases in which ‘ physical incapacity’ would prevent the acquirement of a serviceable ‘ amount of musical knowledge and skill’ would be found as rare as those in which no progress could be made in arithmetic.” I am willing to admit that this was once merely an *hypothesis* so far as I am concerned ; I think it may now fairly lay claim to the title of a *theory* based upon experiment.

The paper I send has been (as you will see) drawn up hastily ; for time presses both of us. It may admit of many modifications. But it seemed better to send at once an imperfect plan than to appear to admit by longer silence that no plan would meet the case before us.

I am, my dear Acland,

Very faithfully yours,

JOHN HULLAH.

Thomas Dyke Acland, Esq.

SCHEME FOR A
PRACTICAL EXAMINATION IN MUSIC.

THE Examiner will place himself at the pianoforte, or harmonium, the Candidates being opposite to him, out of sight of the keys.

1. The Examiner will dictate a passage of melody such as A ; giving only the names of the notes as respects their *pitch* ; Sol, Do, Do, Si, &c. He will then *sol-fa* the passage, or play it with one hand, beating time with the other. The Candidates will write the passage, giving the notes their proper *forms*, and dividing them into their several *bars* or measures.

A



64 SCHEME FOR A PRACTICAL EXAMINATION IN MUSIC.

2. The Examiner will dictate another passage of melody, such as B, giving only the names of the notes as respects their *length*; *minim*, *crotchet*, &c. He will then vocalize (not *sol-fa*) the passage, or play it with one hand, beating time with the other. The Candidates will write the passage, giving the notes their proper *places* on the stave, and dividing them into measures, as before.

B



3. The Examiner will *sing* or *play* another passage, such as C, always beating the time, *without naming* either the names or lengths of the notes composing it. The Candidates will write it as before.

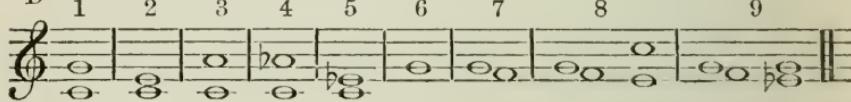
C



The Examiner should name the *tonic* of the two last exercises.

4. The Examiner will name a note, sound it on the instrument, and then combine another, or others, with it, as in D. The Candidates will write these combinations, numbering them as in D.

D



S T A T U T E
 PASSED BY THE UNIVERSITY OF OXFORD,
 JUNE 18, 1857.

*De Examinatione Candidatorum qui non sunt de corpore
 Universitatis.*

Quum sit multifariam petitum ut bonæ spei adolescentes, extra Academiam, literis artibusque humanioribus studentes, examinatione habita in Clientelam Universitatis recipientur.

Placuit Universitati hæc quæ sequuntur sancire—

1. Candidatorum qui non sunt de corpore Universitatis Examinatio, vel intra Academiam, vel, si res ita ferat, etiam alibi, quotannis habeatur duplex; videlicet,—Seniorum qui decimum octavum, Juniorum qui decimum quintum ætatis annum nondum compleverint.

2. Fiat Examinatio tum in Rudimentis Fidei et Religionis (nisi alicujus parentes vel qui in loco parentis sint hanc renuerint); tum in Literis Anglicis, in Historia, in Linguis, in Mathematica, in Scientiis Physicis, et in cæteris artibus quæ ad juventutem liberaliter educandam pertinent.

3. Testimonium accipiat quicunque tum Seniorum tum Juniorum Examinatoribus satisfecerit; titulo etiam Associati in Artibus ex Academiæ auctoritate Senioribus collato.

4. Delegati sint, præter Vice-Cancellarium et Procuratores, duodeviginti, ex iis qui jus intrandi domum Convocationis habent in triennium ad hoc nominandi, sex a Concilio Hebdomadali e suo ipsius corpore, sex a Congregatione Universitatis Oxoniensis, sex denique a Vice Cancellario et Procuratoribus. Quorum sit officium Examinatores nominare, necnon tempora, loca, modum Examinationum, classium numerum, cæteraque eodem pertinentia speciatim ordinare.

5. Feoda a singulis examinandis exigantur, quanta, e judicio Delegatorum, expensis necessariis Examinationum sufficient.

6. Teneantur Delegati ad rationem actorum quotannis Universitati reddendam.

LIST OF THE DELEGATES.

A Delegacy has been appointed for carrying into effect the provisions of the foregoing Statute.

The Delegates are—

- The Vice-Chancellor.
- The Senior Proctor.
- The Junior Proctor.

Members of the Hebdomadal Council.

- Rev. the Master of Pembroke College, D.C.L.
- Rev. the Master of Balliol College, D.D.
- Rev. W. Jacobson, D.D., Canon of Ch. Ch., Regius Professor of Divinity.
- Rev. B. Price, M.A., Fellow and Tutor of Pembroke College, Sedleian Professor of Natural Philosophy, and Public Examiner.
- Rev. H. L. Mansel, B.D., Praelector of Moral Philosophy in Magdalen College, late Public Examiner.
- Rev. J. E. Sewell, M.A., Fellow of New College.

Elected by Congregation.

- Rev. the Provost of Oriel College, D.D.
- J. Phillips, Esq., M.A, Magdalen College, Reader in Geology.
- Thos. D. Acland, Esq., M.A., late Fellow of All Souls.
- Rev. G. Rawlinson, M.A., late Fellow and Tutor of Exeter College, Public Examiner.
- Rev. W. C. Lake, M.A., Fellow and Tutor of Balliol College, late Public Examiner.
- Rev. F. Temple, M.A., late Fellow of Balliol College, Her Majesty's Inspector of Training Schools.

Nominated by the Vice-Chancellor and Proctors.

- Rev. W. F. Hook, D.D., late Student of Ch. Ch., Vicar of Leeds.
- Rev. W. Sewell, D.D., Fellow of Exeter College, and Warden of St. Peter's College, Radley, late Public Examiner.
- Rev. R. Walker, M.A., Wadham College, Reader in Experimental Philosophy, late Public Examiner.
- Rev. O. Gordon, M.A., Censor of Ch. Ch., late Public Examiner.
- Rev. J. W. Burgen, M.A., Fellow of Oriel College.
- Rev. J. E. T. Rogers, M.A., Magdalen Hall, Public Examiner.

UNIVERSITY OF OXFORD.

REGULATIONS FOR CARRYING INTO EFFECT THE STATUTE
 " CONCERNING THE EXAMINATION OF THOSE WHO ARE
 NOT MEMBERS OF THE UNIVERSITY."

EXAMINATION FOR THE YEAR 1858.

The Examination will commence on Monday the 21st of June, 1858.

Junior and Senior Candidates will be examined at the same time ; but the Papers for the two Examinations will be different.

EXAMINATION OF JUNIOR CANDIDATES.

(*For Certificates.*)

Candidates must be under 15 years of age on the day when the Examination begins.

I. All Candidates at this Examination will be required to satisfy the Examiners in

1. Reading aloud a passage from Southey's Life of Nelson.
2. Writing from Dictation.
3. The analysis and parsing of a passage taken from Goldsmith's Deserted Village.

A few questions will also be set on the allusions, &c. in the Poem.

4. Writing a short English Composition, such as a description of a place, an account of some useful natural or artificial product, or the like.
5. Arithmetic.

No Candidate will be passed who cannot work the first

four rules simple and compound, whatever may be his excellence in other respects.

6. Geography.

Every Candidate will be required to draw from memory an outline Map showing the coast line, the chief ranges of mountains, and the chief rivers of some country to be named by the Examiners from the following list:—

England, Scotland, Ireland, Europe, Asia, Africa, North America, South America, Australasia.

Questions will also be set in Geography.

7. The outlines of English History: that is, the succession of Sovereigns, the chief events, and some account of the leading men, in each reign.

N. B.—The quality of the handwriting in the several Exercises will be taken into account.

* II. The Examination in the Rudiments of Faith and Religion will consist of questions in

1. The Books of Genesis and Exodus, the Gospel of St. Matthew, and the Acts of the Apostles.
2. The Catechism, the Morning and Evening Services, and the Litany.

III. Papers will also be set in the following eight subjects; and every Candidate will be required to offer himself for Examination in one subject at least; but no Candidate will be examined in more than four;—

1. Latin.

A passage will be given from Cæsar de Bello Gallico, (Books I. II. III.) for translation into English, with questions on the parsing, and the historical or geographical allusions.

An easy passage for translation from some other Latin book.

A passage of English (with the Latin words supplied) for translation into Latin.

2. Greek.

A passage will be given from Xenophon's Anabasis,

* This Examination will not be required of any Candidate whose Parents or Guardians shall have declined it on his behalf.

(Books I. II.) for translation into English, with questions on the parsing, and the historical or geographical allusions.

An easy passage for translation from some other Greek book.

3. French.

A passage will be given from Voltaire's Charles XII., with questions on the parsing, and the historical or geographical allusions.

A passage from a French Newspaper for translation into English.

English sentences for translation into French.

4. German.

A passage will be given from Schiller's Revolt of the Netherlands, with questions on the parsing, and the historical or geographical allusions.

A passage from a German Newspaper for translation into English.

English sentences for translation into German.

5. Mathematics.

Euclid, Books I. II.

Arithmetic.

Algebra to Simple Equations inclusive.

This amount of knowledge will enable a Candidate to pass in this subject.

Questions will also be set in Euclid, Books III. IV. VI., in Quadratic Equations, Progressions, and Proportion, Plane Trigonometry not beyond the Solution of Triangles, the use of Logarithms, Mensuration, and Practical Geometry.

6. Mechanics and Mechanism.

The questions on Mechanics will be chiefly of a practical character, and will not extend beyond the Parallelogram of Forces, the Centre of Gravity, and the Mechanical Powers.

The questions on Mechanism will be confined to the Mechanism of the Steam Engine.

The answers must be illustrated by diagrams or drawings.

Great importance will be attached to good drawing.

7. Chemistry.

Questions will be set on the elementary facts of Chemistry.

Solutions will be given to be tested, containing each not more than one acid and one base.

8. Botany and Zoology.

Questions will be set on the Classification of Plants and Animals, their uses, and Geographical distribution.

British Plants and parts of Plants will be given for description.

IV. Candidates may also offer themselves for examination in

1. Drawing from the Flat, from Models, from Memory, and in Perspective.

2. In the grammar of Music.

The names of the successful Candidates will be arranged in three Divisions: those in the first Division will be placed in the order of merit; those in the second and third Divisions alphabetically.

After each successful Candidate's name will be inserted his Age, the place of his Residence, and the School (if any) from which he comes to attend the Examination.

The Certificate given to each successful Candidate will specify the subjects in which he has satisfied the Examiners.

The fact that a Candidate has passed the Examination in the Rudiments of Faith and Religion will be entered on his Certificate, although it will not affect his place on the List.

EXAMINATION OF SENIOR CANDIDATES.

(For the Title of Associate in Arts.)

Candidates must be under Eighteen years of age on the day when the Examination begins.

I. All Candidates at this Examination will be required to satisfy the Examiners in

1. Analysis of English sentences and parsing, and correction of faulty sentences.
2. A short English composition.
3. Arithmetic.

4. Geography.

Every Candidate will be required to draw from memory an outline Map of some country in Europe to be named by the Examiners, showing the boundary lines, the chief ranges of mountains, the chief rivers, and the chief towns.

Questions will also be set in Geography.

5. The outlines of English History : that is, the succession of Sovereigns, the chief events, and the characters of the leading men in each reign.

*II. The Examination in the Rudiments of Faith and Religion will consist of questions in

1. The Historical Scriptures of the Old Testament to the Death of Solomon.
2. The Gospels of St. Matthew and St. John, and the Acts of the Apostles.

Those who offer themselves for examination in Greek will be expected to answer questions on the same parts of the Greek Testament.

3. The Catechism, the Morning and Evening Services, and the Litany ; and the outlines of the History of the Book of Common Prayer.

III. Every Candidate will also be required to satisfy the Examiners in two at least of the Sections marked A, B, C, D ; or in one of those four and in one of those marked E, F.

SECTION A.—*English.*

This will include questions in

1. English History, from the battle of Bosworth Field to the Restoration ; and the outlines of the History of English Literature during the same period.
2. Shakspeare's King Lear, and Bacon's Essays.
3. The outlines of Political Economy and English Law.

The Examination will not extend beyond the subjects treated of in the first book of Smith's Wealth of Nations, and the first volume of Blackstone's Commentaries.

* This Examination will not be required of any Candidate whose Parents or Guardians shall have declined it on his behalf.

4. Physical, Political, and Commercial Geography.

A fair knowledge of one of these four classes of subjects will enable a Candidate to pass in this Section.

SECTION B.—*Languages.*

1. Latin.
2. Greek.
3. French.
4. German.

A fair knowledge of one of these languages will enable a Candidate to pass in this Section.

SECTION C.—*Mathematics.*

1. Pure Mathematics.
 2. Practical Mechanics (including Mechanism) and Hydrostatics mathematically treated, Surveying, and Navigation.
- Algebra to the end of Quadratic Equations and Four Books of Euclid will enable a Candidate to pass in this Section.

SECTION D.—*Physics.*

1. Natural Philosophy.

Great importance will be attached to good Mechanical drawing.

2. Chemistry.

Questions will be set on the facts and general principles of Chemical Science.

There will be a practical examination in the elements of Analysis.

3. Vegetable and Animal Physiology.

Questions will be set on Vegetable Physiology in general, and on the functions of Vertebrata in Animal Physiology.

Parts of plants and bones of Vertebrata will be given for description.

Great importance will be attached to good Botanical and Anatomical Drawing.

A fair knowledge of one of these classes of subjects will enable a Candidate to pass in this Section; but in all cases a practical acquaintance with the subject-matter will be indispensable.

SECTION E.—*Drawing and Architecture.*

1. Drawing from the Flat, from Models, from Memory and in Perspective; and Drawing of Plans, Sections, and Elevations.
2. Design in pen-and-ink, and in colour.
3. The History and Principles of the Arts of Design.

A fair degree of skill in free-hand drawing will be required in order that a Candidate may pass in this Section.

SECTION F.—*Music.*

1. The Grammar of Music.
2. The History and Principles of Musical Composition.

The Elements of Thorough Bass will be required in order that a Candidate may pass in this Section.

Separate lists of those who distinguish themselves will be published for each of the Sections A, B, C, D, E, F, arranged in two Divisions.

The names in each First Division will be arranged in order of merit; those in each Second Division alphabetically.

The names of the other successful Candidates will be printed in a general alphabetical List.

After each successful Candidate's name will be inserted his Age, the place of his Residence, and the School (if any) from which he comes to attend the Examination.

Every Candidate who passes will receive the Vice-Chancellor's Certificate conferring the title of Associate in Arts, and specifying the subjects in which he has satisfied the Examiners.

The fact that a Candidate has passed the Examination in the Rudiments of Faith and Religion will be entered on his Certificate, although it will not affect his place on the List.

Place of Examination.

The Examination will be held in Oxford, and simultaneously in other places, if it be requested, and found expedient.

Local Committees wishing to have an Examination held in their several districts may obtain all necessary information from the Rev. J. E. SEWELL, New College, Oxford.

Time of applying.

Candidates desirous of being examined at Oxford must apply on or before the Tenth of April, 1858.

Local Committees desirous of having Examinations held in their several districts must apply on or before the 1st of March, 1858, specifying the probable number of their Candidates.

The names of these Candidates must be transmitted to the Rev. J. E. SEWELL on or before the 10th of April, 1858.

Fees.

Every Candidate at the Junior Examination will be required to pay a Fee of 10*s.*

Every Candidate at the Senior Examination will be required to pay a Fee of 30*s.*

These Fees must be paid on or before the 10th of April, 1858.

J. E. SEWELL, Honorary Secretary.

Oxford, November 12, 1857.

APPENDIX.

I.—CORRESPONDENCE

PREVIOUS TO THE PASSING OF THE NEW OXFORD STATUTE.

Two Letters from the Rev. F. TEMPLE, late Fellow of Balliol College, Oxford, H.M. Inspector, to the Rev. Dr. JEUNE, Master of Pembroke College, Oxford, formerly Head Master of King Edward's School, Birmingham.

MY DEAR MASTER,

8, Royal Crescent, Notting Hill, London,
April, 1857.

I promised to put on paper the substance of the conversation which I had with you in Oxford a little while ago on the subject of middle-class education.

The education of the middle classes suffers at present from the want of any definite aim to guide the work of the schoolinasters, and from the want of any trustworthy test to distinguish between good and bad schools.

That the result is unsatisfactory all who know anything of the matter agree in proclaiming. It is constantly said, and said with truth, that many national schools now give a better education than can be obtained at schools of much higher pretensions. The masters in the national schools know precisely what they are expected to do, and know that the Government Inspection will almost invariably in the end bring into clear light, whether or not they have done it. The masters who now teach the middle classes have no means of knowing either the one or the other. They are, speaking generally, expected to prepare boys for what is called business. Now this is so vague an aim that they may well be forgiven if they miss the proper means to reach it. But even if they so thoroughly understand their duties as to give precisely what is wanted, they have no means of convincing the parents of their pupils that they are doing so. In not a few instances the parents are misled into preferring what makes a show to what is really useful, and I have known a case where a very efficient master was driven away by the competition of one in every way his inferior, simply because the latter

taught a showy but quite useless kind of penmanship. In all cases the plausible puffer has a most unfair advantage over the thorough teacher; an advantage which would instantly disappear if the work of the two were brought to any real test.

This neglected condition of the education of the middle class becomes more striking when contrasted with the great efforts made to improve the education, both of those above and those below that class. The Universities, which have been to a great extent occupied by the upper class, are actively engaged in improving their system. The Government has spent two millions and a half upon the lower class, and is still spending at the rate of half a million a year. But nothing whatever is done for those who lie between.

And this neglected class has a very wide range, including many who are socially on a level with some of those who enter the Universities, and a few of the more active minded among those who are taught in our national schools. Here are to be found, without doubt, the great body of our Voters, of our Taxpayers, of our Ratepayers. It is obviously wrong to leave them out of sight when speaking of the education of the country.

The remedy, I believe, is in the hands of the Universities. If Oxford and Cambridge were to undertake the task of guiding and testing the instruction given in the schools of which I am speaking, I am confident that their guidance would be gladly accepted, would speedily remedy the evils that I have described, would confer a great benefit on the country, and would react most beneficially on the Universities themselves by increasing their popularity and the general sense of their value.

I do not think any complicated scheme is needful for this purpose. What I should propose would be this:—

That the University should confer some such title as Associate in Arts on every person who passed an examination before Examiners appointed either by the Hebdomadal Council, or by a Delegacy, as might be thought best.

This examination should pretty nearly follow the precedent set by the present Final Schools. An examination of a somewhat similar kind to what I am proposing is to be tried in Devonshire this summer, at the suggestion of Mr. Acland; . . . and the way in which it has been welcomed by the classes for which it is intended proves that it suits their case. There is, moreover, an obvious advantage in the University's following a University precedent.

I should propose then a scheme of examination somewhat of this kind—

- 1. A Preliminary Examination in
 - a. Writing from Dictation, Arithmetic, Parsing, and Elementary Geography.
 - b. Religious Knowledge (if the Parents of the Candidate desired it).

- 2. Four Schools :—
 - a. The School of English, to include English Literature and Composition, English History, the Rudiments of Political Economy, Geography.
 - b. The School of Languages, to include French, German, and the Elements of Latin.
 - c. The School of Mathematics, to include Practical Mathematics, Architecture, and Drawing.
 - d. The School of Physical Science, to include the Elements of Mechanics, Chemistry, and Physiology, and the Sciences connected with them.

Two standards should be fixed: one for boys of 15, the other for boys of 17. The title of Junior Associate should be given to those who passed the former; that of Senior Associate to those who passed the latter.

Every Candidate should be required to pass the Preliminary Examination and one School.

A class list of each School should distinguish those who did really well, from those who merely passed.

The expense of paying the Examiners should be covered by requiring a fee of about 5*s.* for admission to the examination, and another of about 2*s.* 6*d.* for the testamur.

The examinations should be held annually in Oxford. But if the gentry or local authorities of any place asked for an examination to be held in their neighbourhood, and would undertake to bear the expense of the necessary arrangements, an Examiner should be sent down to them. The examination should, I think, be all on paper, and the same examination papers used everywhere at once.

Now such a scheme as this would not be at all difficult to work. It would give a definite aim and a powerful stimulus to all the education of the middle class. And it would probably bring within its operation many even of the higher class who now enter professions where an academical degree is not wanted, but whose parents would be glad to have the school-work of their boys authoritatively tested if it could be done without the expense of a university education.

The objection which occurred to your mind when I spoke on the subject was a doubt whether candidates would present themselves. On that point I have no doubt. But I have been communicating on this point with several persons interested in education, and in a few days I will again write and tell you the result of my inquiries.

Yours,

*The Rev. the Master
of Pembroke College, Oxford.*

F. TEMPLE.

8, Royal Crescent, Notting Hill, London, W.,

MY DEAR MASTER,

24th April, 1857.

I promised in my last letter that I should write again and state some of the grounds on which I believed that such a scheme of examination as I described would be generally welcomed by those who are concerned in the education of the middle classes, and would not fail for want of candidates to be examined.

I rely chiefly on the fact that plans of this sort have sprung up spontaneously in many different places, and have in every case proved successful; much more successful than could have been anticipated from such merely local attempts, backed by no commanding authority, and relying simply on the existence of a need strongly felt.

Of these schemes of examination the best known is that commenced last year by the Society of Arts. In 1852 that Society, at the suggestion of Mr. Harry Chester, proposed to the various Mechanics' Institutes scattered over the country that they should affiliate themselves to the Society as a sort of centre of union. This was very generally agreed to, and between three hundred and four hundred of those bodies entered into the proposed union; and while by this means the institutes gained a centre, the Society gained a means of acting very widely on the country at large. In 1854, at the suggestion of the same gentleman, the Society proposed to hold examinations for all members of these institutes, and to grant certificates of competency in a great variety of subjects to all who passed the examinations. The first examination was held in London last June with complete success; I was myself one of the examiners. Fifty-two candidates presented themselves, and a majority obtained certificates. This year a similar examination will be held in two places, London and Huddersfield. We do not yet know the number of candidates, but we do know that it will be very much larger than last year. Nor is the number that will come any measure of the

number that desire to come. For the Society was repeatedly pressed to hold examinations in other places, and only refused for fear of breaking down by attempting more than its organization, not originally adapted for such a scheme, would allow.

This scheme, you will observe, though excellent in many ways, does not cover the ground which I am anxious that Oxford should occupy. The Society of Arts examines members of Mechanics' Institutes, and the examination is planned with a view to adults. An adult, if he is to study, would generally succeed best by keeping to a single subject; and accordingly the Society's examinations are broken up into a great number of separate divisions: a man may be examined separately in history, or in English literature, or in geography, or in chemistry, and so on. It is obvious that this is not the best way in which to test the work of schoolboys; and indeed the Society of Arts expressly excludes boys at school from its examinations.

Boys at school are, however, precisely those whom the University may most properly make the objects of its care. The University may very properly do what the Society of Arts could not arrogate the right of doing, namely, offer to guide all the schools in their work, and to stamp that work with authoritative approval. And I have no doubt that the same reasons which brought so many candidates to the examinations of the Society of Arts will bring very many more to the examinations of the University of Oxford. None, I think, but University residents are unconscious of the high prestige which the University enjoys in the country at large, or how very eagerly any title would be sought which implied connexion with Oxford or Cambridge. The first remark that has been made to me by numbers of persons to whom I have described the plan has been, "If the University will do what you propose, my boy shall go in for the examination."

The examinations held by the Society of Arts are the best known. But there are other schemes of the same kinds in operation. One which has been planned by Mr. Acland for examining boys destined for arts, manufactures, agriculture, or commerce in the West of England, very nearly represents in its most important features what I wish to see taken up by the University and extended to the whole country. It is intended for schools, not for Mechanics' Institutes; and it groups the subjects of study nearly as I have done, following in fact the precedent of the Oxford final examinations. The proposal was not made public before Christmas, and it offers few inducements except a certificate of success to bring candidates within its range. But it has been generally welcomed; more than thirty schools have already announced their assent to it, and nearly a hundred candidates have declared their

intention of being examined.* Mr. Acland's machinery is a Local Board of Examiners, with the aid of two Inspectors from the Committee of Council. But he intended his proposal as an experiment, to be followed up either by the Government or by some other authority. He would gladly see it replaced by the action of the University; and the thirty schools who have agreed to send boys to be examined by Mr. Acland's Local Board would certainly be at least equally ready to send them before a board representing the authority either of Oxford or Cambridge.

At the same time that Mr. Acland was applying to the Committee of Council for aid in working his project, another somewhat similar application was made by the Honourable and Reverend S. Best on behalf of a Board of Education in Hampshire. This application was refused on some technical grounds, but the scheme has not been dropped, and in some shape or other will very speedily be brought into operation.

Similar examinations for schools of a somewhat lower character have been organized under the name of prize schemes in the counties of Staffordshire, Cheshire, Shropshire, Warwickshire, and in South Wales. Others are proposed in Lancashire, Yorkshire, and Northumberland. In all cases when the examinations have been held a very large number of candidates have presented themselves; at the Staffordshire examinations last year there were 644 candidates examined.

It is true that in all these schemes, including that of the Society of Arts, prizes have been offered for competition. But, in the first place, the number of prizes has not borne any proportion to the number of candidates; and in the second place, the majority of the prizes have been generally offered, after the scheme has been set on foot, by persons external to it; and I have no doubt that similar prizes, to be awarded by the University examiners, would be offered by persons desirous to encourage education in their own locality, if the scheme that I propose should be adopted.

I think it impossible to see this general and spontaneous movement, differing in detail, but everywhere similar in real character, without perceiving that the Universities have here a great opportunity.

The organization of all this spontaneous action is what they, and they alone, can accomplish. And to do this would be to confer on the country a lasting benefit only limited by the good sense and tact of those who might be appointed to administer the plan.

* These communications proceed from the counties of Devon, Cornwall, and Somerset, but chiefly from the first-named county, as, owing to local causes, it was not found practicable at an early stage of the proceedings to circulate information on the subject so extensively in the other two counties.—T. D. A.

But I have yet one further, and perhaps more forcible proof, that I am not asking Oxford to take a premature, and therefore a false step. After my conference with you the other day I communicated the outline of my proposal to persons interested in education in various parts of the country. The result will be, I have reason to believe, the presentation of petitions to the Hebdomadal Council from several large towns, and some schools and educational associations, praying for the adoption of a plan of the sort. In bringing some of these petitions before the Council I shall hope for your co-operation.

Yours ever,

F. TEMPLE.

*Letter from the VICE-CHANCELLOR of the University of OXFORD,
formerly Head Master of Winchester.*

MY DEAR SIR,

New College, April 24, 1857.

I thank you much for kindly sending me a proof of your forthcoming pamphlet on Middle Class Education.

Your plan promises to confer great benefit on the middle classes by the improvement of their education ; and the co-operation of the University, which I trust will be found practicable, may be serviceable to itself as well as to them.

I shall be happy to do what I can to procure for it a fair and favourable consideration.

I am, my dear Sir, with true respect,

Yours very sincerely,

T. D. Acland, Esq.

D. WILLIAMS.

*Letter from the VICE-CHANCELLOR of the University of
CAMBRIDGE.*

MY DEAR SIR,

Cambridge, May 18, 1857.

Since I had the pleasure of seeing you in Cambridge, I have had the opportunity of mentioning to several members of the Senate the question of bringing into connexion with the University the education given in commercial and middle-class schools. I find a general readiness to acknowledge the importance of the question, and a disposition to take into serious consideration the way in which such connexion might be best established and maintained.

It will give me great pleasure to use what means I have for bringing the subject under the notice of the University, with a view to the adoption of some practical measures respecting it.

I am, my dear Sir,

Yours very faithfully,

H. PHILPOT, Vice-Chancellor.

T. D. Acland, Esq.

*Extract from a Communication to the Editor from Dr. ACLAND,
Dr. Lee's Reader in Anatomy and Radcliffe Librarian in
Oxford.*

April 24, 1857.

Your plan for encouraging the good and for raising the inferior Middle Schools is so simple, and the necessity of some improvement so certain, that it is wonderful that it should not have been hit upon before.

If in any way the scheme can be connected with the Universities, a double advantage—both to the Schools and Universities—will certainly follow. All the active minds in this place have long felt that some assistance towards the education of the Middle Classes was due from us, and that their increased support and maintenance was to ourselves almost a necessity. How to procure the union was the only question? The methods you propose will show the way.

We have lately discussed our relations to the mass of the medical profession, and a committee appointed to confer on the subject reported among other things—“Your Committee is further of opinion, that, in order to enable a larger body of persons preparing for the practice of Medicine and Surgery to avail themselves of the educational advantages offered by this University, it should facilitate to the utmost every arrangement consistent with its character for reducing to a minimum the residence and expenses to be demanded from the mass of such students, reserving the present more extended course and the higher qualifications for the superior grades, or more ample leisure, of a smaller number of the profession.” This sentiment will show you the desire of many people here to extend the benefits of University training in all ways that consistently with our other duty we are able. During the discussions which called forth the above other resolutions were drawn up, which, as far as the study of medicine is concerned, confirmed your general notions of the functions of a University, viz.:—

- “ That a good general education, followed by adequate scientific training, forms the best preparation for successfully studying the Surgical and Medical practice of Hospitals.
- “ That this general education, and this scientific training, together with the examinations belonging to them, are pre-eminently the functions of a University such as Oxford.
- “ That large hospitals with large populations to supply them are the fittest places for clinical instruction.
- “ And that the examinations connected with this clinical study can be most advantageously conducted in the metropolis.”

Let me say one word more in confirmation of your remarks on Art. Many of us have long felt it to be a serious evil that we have no Professor of Art. That we have not can only depend on a misunderstanding of his functions. What could he have to do? is asked by some. The truth is, on the contrary, there is scarcely any single man who could properly discharge the duties of the office. Art is the largest mode of expression of human thought, ranging through almost all ages, spoken in every country, and delivered in nearly every material. In buildings, on medals and coins, in porcelain and earthenwares, on wood, ivory, parchment, paper, and canvas, the graver or the pencil has recorded the ideas of every form of society, every variety of race, and every character of mind. It may be confidently said the office can only be adequately filled by one who, having pre-eminent mental qualifications, has also had a thorough classical education in the widest sense, and then enjoyed the greatest and most varied opportunities of research and observation, both of Art and of Nature.

Now think of the national evil, that our students have this never put before them. What a different thing the public opinion which judges of our Art Exhibitions would become if our patrons when young had hung on the lips of one able to teach, in the temper of a great Artist, this most humanizing of all aspects of human life!

Having long felt this, you will believe what pleasure your remarks have given me, and you will understand how gratified I am that one of the students in our Natural Science School is using now the scanty means which for a more happy day I have been able to collect in the Christ Church Museum, and is about to take up, as part of his work in the Physiological School, “ the Development of the Human Form in its Relation to Art.” I need not tell you that this is a fundamental and very difficult, though perhaps a small portion, of the subject in question.

H. W. A.

*Letter from Rev. HARVEY GOODWIN, late Hulsean Lecturer,
Cambridge.*

MY DEAR SIR,

Cambridge, May 20, 1857.

I thank you very sincerely for bringing under our notice in Cambridge a subject of great interest and importance. The subject may, perhaps, have frequently floated before the minds of many of us; but you have brought the matter to a practical issue, and compelled us to consider whether anything can be and ought to be done.

For my own part, I have long reflected upon the condition of middle-school education in England, and the necessity of bringing it to a higher standard. What Mr. Temple has said in one of his letters is undoubtedly true, namely, "that many national schools now give a better education than can be obtained in schools of much higher pretensions;" indeed, so far as education has been made a national matter, and supported by public money, it has been apparently done upon the supposition that the salvation of England depended upon raising the poorer class of people intellectually and morally above the heads of their employers. Of course reasons may be given why the educational impulse should have been made such as it has been, and it is very probable that it could have been made in no other way; still the result is such as I have alluded to, and it seems obvious that our next step ought to be to restore educational equilibrium by giving a fillip to the class who have hitherto been the most neglected. So strongly did I feel this ten years ago or more, that, as Secretary to our Cambridge Board of Education, I endeavoured (though unsuccessfully) to extend the influence of the Board to the middle schools of the district, at least to such as might be ready to welcome our aid.

Now comes the question which you have practically raised, Can the middle schools be assisted by the Universities, and how? Leaving details to be settled at a future time, I cannot help believing that a system of examinations conducted by the Universities, and having all the weight of character which the Universities could give them, is perfectly feasible, and would be productive of the most unspeakable benefits. As a guide to reading in the schools throughout the country such examinations would be invaluable; examinations are in fact, as we know here from experience, the only efficient guide to reading: the Senate-house here gives the law to tutors; and if a good examination were carried on throughout the country, the schools would have to model their studies accordingly as a matter of necessity.

Nor would the competition amongst different schools be an unim-

portant consideration. Parents would naturally regard success in the University examinations as a fair test of the merit of a school ; they would select schools for their children accordingly, and—which is more important—they would have the means of knowing, when their sons came to a certain age, whether they had learned anything or not.

And unquestionably a certificate of having passed a creditable examination before the Oxford or Cambridge examiners would have an estimable, and a very considerable, actual money value in the commercial world. I have been informed, on good authority, that already several banking houses in the City have made it a rule not to admit any clerk who does not bring with him a Society of Arts' certificate ; and, I think, without any undue conceit of the standing of the old Universities, one may conclude, *à fortiori*, that a certificate from one of them would be recognised extensively as a pass-ticket to commercial employment.

In such ways as these I apprehend that what is called Middle Education might be benefited by a system of University examinations. In so saying, I would especially guard myself against being supposed to imply that by such means it would be possible to communicate to the middle classes the peculiar advantages of Oxford and Cambridge. No examinations can be a substitute for *residence* ; and those features of University life which chiefly make Oxford and Cambridge what they are, and to which you and I probably look back as amongst the most blessed influences ever brought to bear upon us, must still be reserved for those who are able and willing to give several years to unbroken University study. But because we cannot give all, we need not hesitate to give what we can ; and while residence must be confined to comparatively few, the benefits of examination may be conferred upon a multitude. But how would the schools themselves accept the scheme ? It seems to me that you have done a good deal towards proving that they would accept it most thankfully ; and, upon general grounds, I think it may be concluded that they could scarcely do otherwise ; and that, if a few only saw the advantage of what was proposed to them, they would compel others, in self-defence, to throw themselves into the plan. Not that I imagine that our schoolmasters would need such influence to be brought upon them. I have no doubt that a large proportion of them are upright, conscientious men, desirous of doing their best in their highly responsible occupation, and I believe that they would rejoice in having such a guide as a University examination would be, and would accept it with thankfulness.

A letter received a day or two back from my friend Mr. Barry, the

head-master of the Leeds grammar-school, suggests that there is a class of schools not included in the general name of middle schools, which probably would be quite as ready to accept assistance from the Universities. Why should not the system of examinations be organised upon such a basis as to make them suitable for schools of different classes, and at all events to meet the wants of the grammar-schools of our towns?

The machinery necessary for carrying out the plan would be very simple. We should merely require a Grace of the Senate, appointing examiners, and empowering them to grant in the name of the University certain certificates of merit. The general outline of subjects for examination would of course also require University sanction. I question whether Mr. Temple's standard of fees would be high enough to cover expenses; but this is a mere matter of detail; and I think that, in order to give the plan its full development, or rather to do it anything like justice, it would be necessary that the examinations should be held, not at Oxford and Cambridge exclusively, but at a considerable number of central points chosen throughout the whole kingdom. This seems to make the working of the plan portentously large; but I am persuaded that *it must be a large concern, or it must fail altogether.* We must consider the whole of England as the field for our operations, and must make our arrangements accordingly.

But what will the Universities themselves say? or rather what will Cambridge say? for that is the question to which you will expect *me* to give an answer, and to ask which you took the trouble of paying our University a visit the other day. In the first place, judging from the general spirit of the place, I believe that a proposition for carrying out some such plan as that which you have brought before us would meet with great favour; there is abundance of spirit and zeal amongst us, and great readiness to advance education in all feasible ways: and in the second place, so far as I have had an opportunity of talking the question over with individual members of the University, I have found that the plan meets with attention. I have no right to introduce the names of those with whom I have had conversation; otherwise I could give you the names of several distinguished men who have spoken of it with the highest praise, and have said that it is "exactly what the University ought to do." Of course there will be many whose caution will make them hesitate; and it is quite right to remember, that the Universities ought not to put their hands to the work, unless they see very good reason indeed for believing that they will be able to carry it out to a successful issue.

And I believe that there is a strong sense amongst us of the truth of what you have said in your preface. We want something which shall endear us to the middle classes; we want something which shall make Oxford and Cambridge more than mere names in the minds of those classes, and prevent them also from being regarded as merely clerical seminaries; we want a wider field of action, in order to make even the work that we are doing at present more effective and influential. Nor can I doubt that one of the effects of establishing the *entente cordiale* between ourselves and the country at large would be to enable us to catch up many a boy of talent, who is fitted for the higher departments of mental exertion. It is remarkable how many Cambridge boys have distinguished themselves at this University; if there be a boy of peculiar promise, the influence of the University is almost sure to bring him up to his proper level. And may we not question whether Jeremy Taylor would certainly have been what he was, had his father been a small tradesman in a provincial town?

What I should chiefly like to hear in the present condition of affairs is, that the movement was thoroughly appreciated in the country at large. I trust that the Universities will not be slack to use for good any advantages, which God in his providence may have given them; but, in self-defence, or rather in defence of the interests committed to them, they cannot afford to fail; and it would strengthen the hands of those who look upon the movement with favour, almost indefinitely, if it could be made to appear by documentary evidence that it was regarded with the like favour by those for whose benefit it is intended. Why should not the plan, which, I think, has been adopted in one or two places, be adopted generally, namely, that of memorialising the Universities on the subject, and requesting them to extend their influence to a department of education at present lying practically beyond its circle?

I have written this letter in great haste, having, as you know, abundance of occupation. But if you think it can be of any service, as coming from Cambridge, you are welcome to make any use of it you please.

Believe me,

Yours sincerely,

T. D. Acland, Esq.

H. GOODWIN.

Letter from Rev. ALFRED BARRY, M.A., late Fellow of Trinity College, Cambridge, Head Master of Leeds Grammar School.

MY DEAR SIR,

Leeds, May 21, 1857.

It is with the greatest pleasure that I see the attempt to establish a system of Examinations for Middle Schools under the sanction of the Universities. We have drawn up a petition from Leeds stating our views on the subject: it has been signed by many who are interested in Middle-Class Education, and the number of signatures might very easily have been increased. I have not the slightest doubt that such a movement would be welcomed all over the country by all Grammar Schools, Commercial Schools, &c., as one of the greatest boons they could receive.

The Middle Schools of the country are left at present to go their own way, and are liable accordingly to alternations of activity and decrepitude, according to the individual characters of the masters. At this moment there is going on in the most important class of them, viz. the Grammar Schools, a decided and general revival, which is, to my mind, one of the most hopeful of all signs of educational progress. For the class attending these schools is most important, drawn as it is from the middle ranks of society, with a slight admixture from the classes above and below; and the schools themselves play a most prominent part in that fusion of classes which is the stability of English society. It is a matter of every-day experience, that, through these schools, boys, the sons of small tradesmen or working-men, rise, by force of ability, to a higher rank, and hold in after life positions of influence which they would never otherwise have obtained. Anything, therefore, which can give such a stimulus to these schools as is necessary to enable them to keep pace with the progress of the Elementary Schools of the present day, will be of great value, even in a national point of view.

Now the Universities at present guide us very little. I have 200 boys, and yet do not send on an average more than three every year to the Universities; nor do I think it likely that this number will increase to more than six or seven at the outside. The mass of the boys go elsewhere, to what is called "business" chiefly; and we have no means of showing whether they are well taught or not. Nothing could possibly help us more than the power of referring to "honours" gained in examination. There are many reasons in my mind against Government Inspection; it might be forced on endowed schools, but

I do not think they would willingly submit to it. The Universities, on the other hand, would be gladly looked up to as our natural guides, and they would be able, of course, to supply such Examiners as must command unlimited confidence. Whenever they think it right to open any examination, they may rely on not wanting candidates for their certificates and honours.

The advantage to the Universities of taking a wider sweep of influence, and guiding the education of the country instead of that of the upper classes only, would be very great. It is certainly their peculiar duty to educate rather than examine; and if the proposed scheme tended to diminish the number of those sent to the Universities, it might be, in spite of other advantages, one of doubtful expediency. But I feel convinced that, on the contrary, by encouraging rising talent, and giving it experience of educational distinction, it would tend to make many go on farther in the same course, and aim at that University career by which they would be proved able to profit.

For all reasons, therefore, both as a Cambridge man and a Grammar School master, I feel deeply interested in the scheme, and sincerely trust that our own University may not fall behind the example of activity at Oxford. If I can do anything to forward it, I should consider it a duty and a privilege so to do, at the expense of any time and trouble.

I am, dear Sir,

Yours very truly,

T. D. Acland, Esq.

ALFRED BARRY.

*Letter from Mr. TEMPLETON, M.A. of the University of Aberdeen,
Principal of a Classical and Commercial School in Exeter.*

DEAR SIR,

St. David's Hill, Exeter, May 2, 1857.

I have read with great pleasure your article on Middle Class Education, with much of the contents of which, respecting your scheme of prizes for Practical Schools, I was previously acquainted. But the admirable letters of Mr. Temple are new to me; and the light in which the subject appears to be regarded by some of the leading men at Oxford gives the whole matter a far more important aspect than any local effort—earnestly pursued as yours has been—can invest it with. For a quarter of a century I have been a teacher, and for the last twelve years or more at the head of the largest independent school in this neighbourhood,

numbering at present seventy pupils ; I may therefore, I trust, without presumption, be supposed to know something of the duties of a teacher and the difficulties he has to contend with ; of the aims and objects of parents in placing their children at school ; and of the requirements necessary for fitting a youth for the engagements of after life. I know I express the sentiments of many earnest men engaged like myself in tuition, when I say that we accept with thankfulness the efforts you are making to raise the position of the instructor and improve the education of the middle classes. Your scheme and Mr. Temple's are so identical in purpose, and, with slight differences, so similar in detail, that I treat them as one. You give us an object to work for, a stimulus both to master and pupil, in striving to attain the object held out ; and if the Universities would sanction the scheme, and grant some honorary title to those who fairly come up to a fixed standard, a lasting benefit would be conferred on that class of the community which forms the backbone of English society, and on which the well-being of the State mainly depends ; from which the higher classes are often recruited, and on which the labouring population chiefly depend for their subsistence. We want no State assistance or interference, but some such plan as you offer us—a scheme suggesting a well-defined course of branches to be studied, with the names of good books to be used in our work ; and when we have fairly striven to do our duty, an opportunity, by a public examination, to show what we have done ; and if that is satisfactorily done, a stamp of approval on the labour of the teacher by the publication of the success of his pupils ; and if the Universities will be pleased to grant it, some honorary title, which the pupil may carry out with him into the world to aid him in after life. Mere money rewards to successful candidates—useful in starting a scheme, but not permanently to be looked for—cannot effect this purpose, and neither sensible parents nor right-minded boys would in the end care much for such rewards. They would look with far more satisfaction on such a title as “Associate of Arts,” connecting them in some slight way with the Universities.

In middle-class schools in these days we sadly lack a stimulus to exertion among our pupils, especially when they reach the age, say of 14 or 15, when the rivalry for places in a class and other discipline have ceased to exert the influence they did in earlier days ; and many an anxious master must see with grief the apathy felt by some one of his pupils at an age when, if he had the boy's hearty co-operation, the greatest possible good might be produced. Your scheme gives the requisite stimulus ; the youth has something to work for, which, if he has

fair abilities and is diligent, will bring him present distinction and possibly future advancement in life.

I venture now to make a few observations on your own and Mr. Temple's schemes. I have read with delight many of his reports in the 'Minutes of the Committee of Council on Education,' and also his paper in the 'Oxford Essays.' As far as regards encouraging youths to come forward for your prizes who have left school and are desirous to improve themselves, I think you are right in holding out rewards to those who labour to get up accurately some *one* branch of knowledge, be it your Department A or any other. Some such view the Society of Arts take in their scheme of examination for adults. But to make a good scheme for pupils leaving school, I think a general examination ought to be insisted on. To allow a boy to come forward in one department and neglect the others would be ill-fitting him for the business of life, and might encourage a system of tuition which you would be the last to countenance. I, therefore, should be inclined to lay much stress on your preliminary examination, and should like to see it include good plain handwriting, correct writing from dictation, a knowledge of the Elements of English Grammar and Arithmetic, and some Geography and History, with the power of the pupil's expressing his ideas on paper on some familiar subject. Then proceed to Language and Science, your Departments B and C, and expect either a fair knowledge in both or some such superior knowledge in the one as to justify shortcoming in the other. Some subjects, perhaps, in your Department D may be beneficially transferred into Departments B and C. I mean, for instance, Commercial Geography, &c.

The practical tendencies of the age will allow no teacher to neglect instructing his pupils in arithmetic, the elements of mathematics, and some portions of science; parents also will demand the rudiments, at least, of French, and the study of that language cannot be disregarded in any respectable middle-class school. But with great deference to Mr. Temple's high abilities as a scholar, and his most extensive employment as public examiner, I cannot but think he lays too little stress on the benefit to be derived from classical instruction in our middle-class schools. Give us a boy of average ability, from the age of 10 to 14 or 15, or let him come to us from the country at a later period of life, with fair previous training, and I conscientiously believe that, without neglecting other branches of education, we can give him such a sufficient knowledge of Latin as will open his mind, and very possibly be a benefit in after life. With an acquaintance with the inflections, the ordinary rules of syntax common to all languages, and a few special rules

peculiar to the Latin, such as the accusative before the infinitive, the ablative absolute, and some familiarity with the use of the subjunctive mood, he may be soon taught to read a simple Latin author, as Cæsar, Nepos, or Ovid ; and the power of translating these into his own mother tongue will give him a command of language he never before possessed, and will improve the memory, quicken the perception, and teach an accurate attention which he cannot obtain in the study of modern languages, whose structure is so different from that of the dead. Besides, in mathematics and higher arithmetic there is often a limit, and that not a very advanced one, beyond which a lad cannot go ; and even if he do advance considerably in the study of mathematics or science, to the neglect of language, this has a *hardening* effect, and fails to call out the imagination and many of our highest and best feelings.

The stern realities of life, and the struggle to keep his social position, will harden his mind soon enough ; so before life's battle begin, let him lay up something—be the store ever so small—to soften and humanize him ; and let him have some knowledge of the classic models hallowed by having been for ages the medium for literary instruction, which he cannot fail to take pleasure in if he has been instructed by a master fit for his duties. I trust that in no scheme for middle-class education will a knowledge of Latin hold a subordinate place. Again begging to express to you my most earnest approval of your scheme,

I am,

Yours most respectfully,

T. D. Acland, Esq.

JAMES TEMPLETON.

MEMORIAL

From Members of the Medical Profession in London, addressed to the Universities of Oxford and Cambridge.

GENTLEMEN,

We, the undersigned, being or having been physicians, surgeons, and teachers of the Medical Sciences in the Hospitals and Medical Schools of London, are informed that the governing bodies of the Universities of Oxford and Cambridge are considering a plan for the institution of voluntary Examinations and Distinctions in the various Schools for general education throughout the country.

We believe that the adoption of such a system may be most beneficial, by supplying a means primarily for testing, and secondarily for increasing and guiding the preliminary knowledge of many who are destined for the study and practice of Medicine; thus meeting a want which has been long and deeply felt.

We therefore desire to express our hearty concurrence in the proposal, and our hope that it will be adopted.

(Signed)

- W. ADAMS, Assist. Surgeon to the Royal Orthopaedic Hospital.
- T. ADDISON, M.D., Sen. Phys. & Lect. on Practice of Physic, Guy's Hosp.
- J. M. ARNOTT, F.R.S., Mem. of Coun. & Court of Exam. R. Col. of Surg.
- Sir B. C. BRODIE, Bart, F.R.S., Serjeant-Surgeon to the Queen.
- W. BALY, M.D., F.R.S., Assist. Phys. & Lect. in Medicine, St. Bart. Hosp.
- G. BARLOW, M.D., Physician to Guy's Hospital.
- J. H. BENNET, M.D., Physician Acc. to the Royal Free Hospital.
- E. L. BIRKETT, M.D., Phys. to City of London Hosp. for Diseases of Chest.
- W. BRINTON, M.D., Phys. Roy. Free Hosp., Lect. Physiol. St. Thos. Hosp.
- C. BROOKE, F.R.S., Surg. and Lect. on Surg. to the Westminster Hosp.
- B. BRODHURST, Assist. Surgeon to the Royal Orthopaedic Hospital.
- P. BLACK, M.D., Assist. Physician to St. Bartholomew's Hospital.
- G. BURROWS, M.D., Phys. and Prof. of Med. at St. Bartholomew's Hosp.
- J. CONOLLY, M.D., Consult. Physic. to the Middlesex Lunatic Asylum.
- A. CLARK, M.D., Assist. Phys. and Lect. on Pathol. at the London Hosp.
- H. COOTE, Assist. Surgeon at St. Bartholomew's Hospital.
- J. COPLAND, M.D., F.R.S., late Lect. on Pr. Med., Middlesex Hospital.
- J. B. CURLING, F.R.S., Surg. and Lect. on Surgery at the London Hosp.
- W. COULSON, Senr. Surgeon to St. Mary's Hospital.
- G. N. EDWARDS, M.D., As. Phys. to City of Lond. Hosp. for Dis. of Chest.
- H. FULLER, M.D., Phys. and Leet. on Forensic Med. at St George's Hosp.
- W. W. GULL, M.D., As. Phys. and Leet. on Practice of Med., Guy's Hosp.
- C. HARE, M.D., Assist. Phys. at University College Hospital.
- B. HOLT, Senr. Surgeon, and Leet. on Clin. Surgery, Westminster Hosp.

- W. C. HOOD, M.D., Superintendent Phys. at the Bethlehem Hospital.
 C. HOLTHOUSE, Assist. Surg. and Lect. on Surg. at Westminster Hosp.
 J. HUTCHINSON, Surgeon to the Metropolitan Free Hospital.
 G. JOHNSON, M.D., Physician, King's College Hospital.
 ATHOL JOHNSON, Lect. on Physiology at St. George's Hospital.
 H. BENCE JONES, M.D., F.R.S., Physician to St. George's Hospital.
 S. WHARTON JONES, F.R.S., Prof. of Ophthal. Surg. at Univ. Coll. and Surgeon to the Hospital.
 W. LAWRENCE, F.R.S., Surg. Extraordinary to the Queen ; Surg. and Lect. on Surgery, St. Bartholomew's Hospital.
 S. A. LANE, Surgeon and Lecturer on Anatomy, St. Mary's Hospital.
 E. LONSDALE, Surgeon to the Royal Orthopedic Hospital.
 E. A. LLOYD, Surgeon to St. Bartholomew's Hospital.
 R. MARTIN, M.D., Warden of the College and Assist. Phys., St. Bart. Hosp.
 W. O. MARKHAM, M.D., As. Phys. and Lect. on Pathol., St. Mary's Hosp.
 G. MACKMURDO, F.R.S., Surgeon to St. Thomas's Hospital.
 C. MURCHISON, M.D., Assist. Phys., King's College Hospital.
 E. NOAD, Ph.D., F.R.S., Lecturer on Chemistry, St. George's Hospital.
 W. O'CONNOR, M.D., Physician, Royal Free Hospital.
 J. W. OGLE, M.D., Assist. Physician, St. George's Hospital.
 J. PAGET, F.R.S., As. Surg. and Lect. on Physiol., St. Bartholomew's Hosp.
 R. PARTRIDGE, Surgeon, King's College Hospital.
 T. B. PEACOCK, M.D., Assist. Phys., St. Thomas's Hospital.
 H. A. PITMAN, M.D., Phys. & Lect. on Practice of Physic, St. George's Hosp.
 J. E. POLLOCK, M.D., Assist. Phys., Brompton Hosp. for Consumption.
 G. D. POLLOCK, Assist. Surg. and Lect. on Anatomy, St. George's Hosp.
 R. QUAIN, M.D., Phys. to Brompton Hospital for Consumption.
 C. B. RADCLIFFE, M.D., As. Phys. & Lect. on Mat. Med., Westmin. Hosp.
 F. H. RAMSbotham, M.D., Lect. on Obstet. and For. Med., London Hosp.
 E. H. SIEVEKING, M.D., Physician to St. Mary's Hospital.
 J. SIMON, F.R.S., Med. Officer, Gen. Board of Health, Lect. on Surg. and Pathol., St. Thomas's Hospital.
 SPENCER SMITH, Surg. to St. Mary's Hosp., and Dean of the Med. School.
 W. TYLER SMITH, M.D., Physician Acc., St. Mary's Hospital.
 H. H. SOUTHEY, M.D., F.R.S., Lord Chancellor's Vis. Lunatic.
 S. SOLLY, F.R.S., Surgeon, St. Thomas's Hospital.
 W. SHARPEY, M.D., Prof. Anat. and Physiol. Univ. Coll., Sec. Roy. Soc.
 A. SHAW, Surg. and Lect. on Surgery, St. Mary's Hospital.
 E. STANLEY, F.R.S., Surgeon to St. Bartholomew's Hospital.
 A. SUTHERLAND, M.D., Lect. on the Pathol. and Treatment of Insanity, St. Luke's Hospital.
 S. TATUM, Surgeon to St. George's Hospital.
 B. TEAVERS, F.R.S., Surg. Ext. to the Queen ; President of R. Coll. of Surg.
 A. URE, Surg. and Lect. on Clinical Med., St. Mary's Hospital.
 P. VAN-DER BYL, M.D., Lect. on Histology, Middlesex Hospital.
 W. COULSON, Surgeon to St. Mary's Hospital.
 J. SPENCER WELLS, Lect. on Surg. at Grosvenor-pl. School of Anatomy.
 C. WEST, M.D., Phys. Acc. and Lect. on Midwif., St. Bartholomew's Hosp.
 C. J. B. WILLIAMS, M.D., F.R.S., late Prof. of Med. & Phys. at Univ. Col.

Memorial from Architects, &c., in London.

WE the undersigned, being Architects, or otherwise interested in the successful prosecution of the Arts of Design, beg leave to express our opinion that some recognised test of the general education given in schools would be productive of great advantage, and our satisfaction that the Universities have under their consideration the establishment of examinations for this purpose.

Believing, as we do, that professional qualifications are best tested by actual practice, we think that the best preparation for professional life is a good general education. But we also think that if some knowledge of the history and principles of the Arts, and of the physical sciences connected with them, were encouraged as a part of the general education of the middle ranks, much national benefit would result from the more just appreciation of the work of professional men.

(Signed)

THOS. L. DONALDSON, Profess. Arch.	P. C. HARDWICK.
Univ. Coll., London.	EDWD. C. HAKEWILL.
C. R. COCKERELL.	CHARLES MAYHEW.
SYDNEY SMIRKE, A.R.A., &c.	JOHN WHICHCORD, F.S.A.
WILLIAM TITE.	JAMES THOS. KNOWLES, F.R.I.B.A.
ROBERT HESKETH, F.I.B.A.	M. DIGBY WYATT, Hon. Secretary R.I.B.A.
JAMES PENNETHORNE, F.I.B.A.	CHARLES GRAY.
BENJ. FERREY, F.I.B.A.	JAS. EDMESTON, Jun.
JOSEPH CLARKE, F.I.B.A.	JAS. FERGUSON.
THOS. HENRY WYATT, F.I.B.A.	J. HENRY STEVENS, F.I.B.A.
ARTHUR ASHPITEL, F.S.A., F.I.B.A., F.R.A.S.	DAVID BRANDON, F.I.B.A.
GEORGE GILBERT SCOTT, A.R.A., F.I.B.A., &c.	A. SALVIN, F.S.A., F.R.I.B.A.
EWAN CHRISTIAN.	WYATT A. PAPWORTH.
W. J. A. MOSELEY.	J. J. SCOLES, V.P. R.I.B.A.
RICHARD CHARLES HUSSEY, F.S.A., F.I.B.A.	EDWARD J. ANSON, F.G.S., F.I.B.A.
	JOHN NORTON.

Memorial from Attorneys and Solicitors in London.

At a Meeting of the Committee of the Metropolitan and Provincial Law Association, held on January 19th, 1858, W. Strickland Cookson, Esq., in the chair, the following resolution was unanimously adopted :—

Resolved,—That this Committee has seen with great satisfaction the regulations which the University of Oxford has made to encourage a higher standard of Education among that part of the youth of the kingdom hitherto unconnected with the Universities.

That the Committee feel these regulations to be especially valuable to the body of Attorneys and Solicitors, inasmuch as they will greatly facilitate arrangements long desired by the body for the purpose of securing that all young men before entering into articles of clerkship shall have received a sound Education.

II.—SELECTED PAPERS RELATING TO THE EXETER EXAMINATION.

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THE documentary matter contained in the following pages is extracted from a journal which in a few days will be on the tables of about a thousand farmers in the West of England. These remarks are prefixed in order to introduce to the notice of those who take an interest in the education of the middle classes, an experiment which is being tried in one corner of the island under somewhat favourable circumstances.\*

A local Agricultural Society, the oldest,† it is believed, in England, has been extended over several counties, and the stimulus of unrestricted competition has brought together a number of persons in various occupations with a common object in view. A thirst for knowledge has been excited; and a consequent sense of the evils of neglected education has been awakened, especially as regards the subjects of language and natural science. A few persons of various shades of opinion, political and religious, having learned to act together and to trust each other, have provided a small prize-fund,‡ with a view to put to a practical test

\* It is right to state, that neither the Council of the Bath and West of England Society, nor the Committee for the Management of the Prize Fund for Practical Schools in the West of England, are responsible for these Introductory Remarks.

† The Society was established in the city of Bath on the 8th September, 1777, “For the Encouragement of Agriculture, Manufactures, Commerce, and the Fine Arts.” No particular attention seems to have been given to the last-named object, but committees were appointed at an early period for “Agriculture and Planting,” for “Manufactures and Commerce,” and for “Mechanics and the Useful Arts.” In the year 1790 it was resolved “that the title of the Society stand as under—‘The Bath and West of England Society, for the Encouragement of Agriculture, Arts, Manufactures, and Commerce.’” This title appears to be in part borrowed from that of the “Society for the Encouragement of Arts, Manufactures, and Commerce,” Adelphi, London, now holding its hundred-and-fourth Session. The Highland Society in Scotland was instituted in 1784, and chartered in 1787. The Board of Agriculture was established in England in 1793.

The present arrangements of the Bath and West of England Society date from the year 1851.

‡ Prizes to the amount of one hundred and twenty guineas, and a life membership of the Bath and West of England Society, are offered for competition. See Notice I., p. 113, also p. 104.

the value which the middle ranks may be disposed to attach to certificates of the progress of their children if awarded by competent examiners.

The promoters of the prizes do not offer education: no attempt is made to found Agricultural Colleges or Middle Schools; no inspection is proposed; still less is it intended to protect the interests of existing establishments by encouraging a monopoly of education. The one thing that is offered to the Middle Classes is an examination which shall test the success of the education given, whether in schools or elsewhere; and thus at once give parents the power of discriminating efficient teachers, and teachers the opportunity of proving their own skill.

With regard to the internal economy of schools, the regulations for moral discipline, the habits of worship (points which have hitherto proved a stumbling-block in middle-class schemes), no interference is attempted, and therefore no responsibility is incurred. That is left, where it must rest at last, with the parents.

The advice of able and intelligent gentlemen engaged in commercial education has been sought and very willingly given.

The Lord President of the Council has most kindly acceded to the request that he would allow two of Her Majesty's Inspectors to act in concert with a Board of Examiners whose names speak for themselves. The value of the co-operation of Her Majesty's Committee of Council cannot be overrated; but it would be obviously inexpedient that the education of the middle ranks should be permanently dependent on the official agency of the government for the time being.

It would seem, therefore, desirable on many accounts that, as soon as the evidence of a willingness to apply for examination is sufficiently established, some more independent and permanent machinery should be provided.\*

It is true that in the practice of former years examinations bore witness (generally though not invariably) to an education given within the precincts of the examining Institution, and therefore implied social and moral training as well as instruction. Of late years, however, it has been found that there is a real want of examination boards accessible to persons who are unable to incur the expenses of University residence. Such examination

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\* The returns of 120 competitors (83 junior, 37 senior) have been received.

boards are the London University, the College of Physicians, the College of Surgeons, and Apothecaries' Hall. Such is the Committee of Council in reference to schoolmasters, and the Board of the Civil Service Commissioners. The Society of Arts again is offering its certificate to a large class of persons in the middle ranks. It is evident that these examinations are in request, and that they exercise a very practical influence on the minds of the candidates, whether for good or evil.

It may deserve serious consideration whether our elder Universities are not in a position to render essential service to the nation at the present time by giving an impulse and a right direction to general education, which is very much wanted.

It is, of course, well known that their regulations, as compared with those of other Universities in the United Kingdom and on the Continent, are peculiar, and that collegiate residence is a necessary passport to an University degree at Oxford or Cambridge; the influence of social life and domestic discipline having there been long regarded, and rightly so regarded, as an element in education not less important than intellectual instruction. It may not, however, have occurred to persons unconnected with the Universities to reflect how much the practical character of the English nation is due, on the one hand, to the liberal education shared in common by a large number of its legislators, judicial and administrative functionaries, clergy, and men of science; and, on the other, to the fact that learned men are not, as on the Continent, permanently gathered together in a few towns, but pass through the Universities into the country to become centres of cultivation in the midst of the practical life of their fellow-countrymen. It is much to be desired that further steps should be taken to extend more widely advantages which have been chiefly confined to the wealthy and to certain professions.

The intellectual life of the people is pushing forth vigorous shoots in various directions; but these independent efforts have a tendency to more or less of specialty and narrowness. The demand for special institutions is, in part, inherent in the circumstances of our time, and is not unreasonable; but it is well known that in more than one department of knowledge the great hindrance to progress is defective preliminary education.

A career of almost unbounded usefulness seems open to the Universities if they will respond to the call of the Nation for

aid in supplying a better general education to the great body of their countrymen. Their fortunate position within reach of, but not within, the Metropolis, their traditional associations, their comparative independence of pecuniary interest, their connexion with so many parishes and grammar schools, all seem to point them out as eminently qualified to give a healthy and liberal tone to school education as a preparation for the busy occupations of agricultural and commercial life, no less than for literary and scientific pursuits. The searching, and sometimes painful, discussions through which the Universities have passed will not have been all in vain if the result shall have been at once to vindicate more fully their true character, and, at the same time, by inducing them to make use of their large opportunities, to secure for them the confidence and gratitude of the nation.

Various projects have been suggested for extending to the middle ranks the benefits of residence in the Universities, but they can hardly be said as yet to have produced much fruit. On the other hand, a considerable number of independent collegiate institutions have sprung up elsewhere: some for general education, others for training with a view to medical, agricultural, engineering, or other special pursuits.

Attempts to establish a standard of education have also been made on narrow or interested grounds, which have entirely failed to command public confidence. Still the want of such a standard continues to be very generally felt, and by none more than by independent teachers, who are conscious of their power and fitness for their work, but are without any public test by which the result of their labours can be fairly appreciated and made known.

Dr. Arnold, in the year 1832, pointed out this deficiency, and the importance of providing for the middle classes "something analogous to the advantages afforded to the richer classes by our great public schools and universities."

"The masters of our English or commercial schools labour under this double disadvantage—that not only their moral but their intellectual fitness must be taken upon trust. I do not mean that this is at all their fault; still less do I say that they are not fit actually for the discharge of their important duties: but still it is a disadvantage to them that their fitness can only be known after trial; they have no evidence of it to offer beforehand. They feel this inconvenience themselves, and their pupils feel it also—opportunities for making known their proficiency

are wanting alike to both. It has long been the reproach of our law that it has no *secondary punishments*; it is no less true that we have no regular system of *secondary education*. The Classical schools throughout the country have Universities to look to: distinction at school prepares the way for distinction at college, and distinction at college is again the road to distinction and emolument as a teacher; it is a passport with which a young man enters life with advantage, either as a tutor or as a schoolmaster. But anything like local Universities—any so much as local distinction or advancement in life held out to encourage exertion at a commercial school, it is as yet vain to look for. Thus the business of education is degraded; for a schoolmaster of a commercial school, having no means of acquiring a general celebrity, is rendered dependent on the inhabitants of his own immediate neighbourhood; if he offends them he is ruined. This greatly interferes with the maintenance of discipline: the boys are well aware of their parents' power, and complain to them against the exercise of their master's authority. Nor is it always that the parents themselves can resist the temptation of showing their own importance, and giving the master to understand that he must be careful how he ventures to displease them.” \*

If the Universities of Oxford and Cambridge should feel themselves justified in extending the benefits of an examination to non-resident candidates (as suggested by Mr. Temple in his letter to Dr. Jeune), under special conditions as to age and other circumstances, and in offering some such title as Associate in Arts to all who passed the examination, those ancient seats of learning might be endeared to thousands who now scarcely know of their existence, or only hear exaggerated reports of their expensiveness, little dreaming of the encouragement and sympathy there held out to industry and talent unaccompanied by wealth. There is good reason to believe that such a distinction would be much valued, and yet be kept in due subordination to higher

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\* ‘Miscellaneous Works of Dr. Arnold,’ p. 229. I am indebted to the Rev. J. Penrose, of Exmouth, for the reference. I may also mention that the subject of Middle-Class Education was treated at length by the late Professor Hussey, in the year 1839, in a pamphlet which he did me the honour to write, in the form of a letter to me, in reply to some questions I had addressed to him at the time he was Censor of Christ Church, on the ground of the desirableness of the members of the University taking an active part in the question.

degrees. The Matriculation examination of the London University \* offers an instance of the principle of University examinations being applied to education given in schools. How easily such examinations might be conducted in various parts of the kingdom, on the application of Local Institutions, is shown by the simultaneous examinations of all the Training Colleges under government inspection.

University men will at once see that in the experiment about to be tried in the West of England examinations something will have been done to familiarize the middle classes with the great practical divisions of general Education—Divinity, Classics, Mathematics, Natural Science; † and that, under the head of Natural Science, Physics, Chemistry, and Physiology have been laid down as the general groundwork, herein following the arrangement adopted for the final examination in one of the Universities. Moral Philosophy and Logic have been omitted as unsuited to the age of the competitors, as at present fixed.

In reference to Religious Knowledge, it will be observed that an examination on a definite basis is offered as a security to parents. On the one hand, no attempt is made to generalize religion; and on the other, it is left open to the parent to decline the examination in religious knowledge, and to resort to other examiners.

Some persons, otherwise friendly to the general plan, have felt compelled, on conscientious grounds, to refuse to take any part in it, because the certificates of all ministers of religion, however contradictory the one to the other, are received as evidence of religious knowledge. It is understood that this refusal would not be persisted in by the persons referred to if parents had simply the option of declining the examination in Religious Knowledge, without tendering a certificate from another quarter. There is also some reason for supposing that the latter course, if adopted in future, would be even more satisfactory to the Nonconformist

\* The examination papers for 1856 are contained in the Calendar (Taylor and Francis, price 3s.), by reference to which the reader can form his own conclusions.

† If it should be objected that this division is not logical, the fact will not be disputed: the justification rests on practical grounds (see Note, p. 121). The moral and social sciences are not included. It is difficult to draw a practical line between pure, applied, and æsthetical science; nor can the term practical science be strictly maintained. Art rather belongs by right to apprenticeship than to education: but any one who has ever arranged his library knows that he must not be frightened out of practical convenience by the terror of a "cross division."

Laity. At any rate, when once the principle laid down for the Universities by Parliament has been accepted, it will be comparatively easy to work out details in a plan which does not profess to offer a system of Education, but only examination in the results of instruction.

It is not to be expected that Classical Scholarship or Higher Mathematics can be cultivated to any great extent by those who are destined to enter into business at or before the age at which University residence usually commences. But there is a daily increasing disposition in the middle ranks to recognise in the Elementary Study of Language, or of Mathematical Reasoning, a better preparation for the practical occupations of life than what has hitherto passed under the name of Commercial Education;\* and many excellent teachers would welcome any support to their own conscientious convictions on this subject which they could obtain without compromise to their independent course of action.

There is one special subject to which a moment's attention is requested, that of *Art*—one of immense importance in a densely-peopled, highly-civilized country. In the proposed examination, prizes are offered to encourage the study of Art, both as a branch of mental Education and as a means of material and economical advancement.

It is respectfully submitted to those with whom it rests to adapt the Universities to the present wants of the English people, that

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\* “The experience of centuries has shown that for those who are to deal with the minds and feelings of men (such as public men and the members of the higher professions), Language is the first instrument of mental discipline; a general acquaintance with Science being superadded with advantage to those who have been well trained, as a means of enlarging the circle of their interests: but for those whose lives are to be spent in supplying the material wants of their fellow men, calculation, that is Mathematical Training, and Physical Science, should take the precedence; while to them Literature is important, chiefly as a means of widening their sympathy and linking them by common thoughts and feelings with other men.

“The objects aimed at by these Prizes are,—1st, to support those Instructors who strive to prepare their pupils for practical life, by giving them a firm and intelligent hold of great principles of judgment and reasoning, and who have the courage to despise technicalities which enfeeble and contract the mind, as well as showy attainments which lay no solid foundation for experience; and 2ndly, to disseminate among the young a healthy taste for good literature, which may make their education more attractive and add to their pleasure in after life.”—[Extracted from an explanatory paper circulated with the original Prospects of the West of England Prize Scheme, before the Committee was formed.]

the Universities might render great assistance to the people at large in this matter of Art. It is one far too important to England to be wholly passed over in a Liberal Education. Moreover, it implies no disrespect to the able gentlemen who direct the machinery of Marlborough House, still less to the distinguished Artists whose works are an honour to our time, to say that the most elaborate technical system, and the most original work of the studio, do not supply all the nation requires. The Study of the History and Practice of Art, in connexion with the other branches of mental cultivation, in an atmosphere removed from the hurried life of the Metropolis, is still a want of our time. There are members of the Universities competent to the task of aiding such study, and willing to undertake it.

It is a fact of some significance that within the bosom of the two Universities individuals originated independent movements in Architecture which have produced a lasting effect over the whole country, and yet, while it is not thought unsuitable for a place of General Education to give lectures on Law, on Political Economy, on Music, and on Agriculture, Art \* is practically unrepresented except by buildings and collections of inestimable value.

With regard to Science generally, it is needless to refer to the advantages which the Universities possess for giving a useful direction to local efforts throughout the land. But perhaps few persons, not immediately interested, are aware what progress has been made by the efforts and liberality of individuals for enabling the Universities to deal successfully with Science as a branch of General Education. It may be confidently asserted that, whatever may be required of them in this direction, they will be found equal to the task, and that without any detriment to those studies which may still demand their first care.

There never was a time when the value of University training was more generally recognised by those to whom it is directly accessible.

Insuperable difficulties may stand in the way of attracting large numbers of Students from the middle ranks to reside in the Universities, and the attempt may even be undesirable.

Do the same objections apply to a proposal for expanding the

\* *Postscript.* — When I wrote these words I was not aware of the Disney Professorship of Archaeology at Cambridge.

circle of examinations, so as to help the heads of families to distinguish between solid and superficial instruction given in schools?

Considering the inevitable effects which must ensue from the general cultivation of Physical Science, and from the creation of a new race of Schoolmasters, any proposal having for its object to bind together active intellects of different classes will doubtless receive such serious consideration as it may seem to deserve.

T. D. ACLAND, junr.

*Sprydoncote, Exeter, April 25, 1857.*

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1. *Resolutions of the Council of the Bath and West of England Society for the Encouragement of AGRICULTURE, ARTS, MANUFACTURES, and COMMERCE.*

At a Meeting of the Council held at Taunton on the 28th of February, 1857, a correspondence on the subject of the Education of the Middle Classes was communicated by Mr. Acland.

At a Meeting of the Council held at Taunton, 28th March, 1857, notice having been duly given by circular to the members of the Council, it was proposed by Samuel Pitman, Esq., and resolved unanimously :—

That the Council have heard with satisfaction that the Committee of Council on Education have consented to co-operate with a Committee formed at Exeter on the 7th January last, for the purpose of establishing a system of examination and prizes for boys educated in the West of England, with a view to employments in AGRICULTURE, ARTS, MANUFACTURES, AND COMMERCE.

That the Council fully assent to the opinion that skill in business generally is best acquired by practice, and that the best preparation for practical life is a good general education.

That the co-operation of some independent Examiners with a Local Committee appears well calculated to secure confidence in the results of the Examinations.

That the Council learn with satisfaction that in the present more extended scheme, as well as in that laid before the Council by Lord Ebrington in October, 1855, several Members of this Society are taking an active part, and they beg to place at the disposal of the Committee an Honorary Life Membership of this Society to be competed for as a Prize.

*2. Letter from the Exeter Examination Committee to the Committee of Council on Education.*

SIR,

Sprydoncote, Jan. 23, 1857.

I have the honour to submit for the information of the Committee of Council on Education certain Proposals (see pages 107, 109) adopted at a Meeting held at Exeter, on the 7th January, for the purpose of establishing a System of Examination and Prizes for Boys educated with a view to employment in Agriculture, Arts, Manufactures, and Commerce, and to express the hope of the promoters that the plans proposed may receive assistance from their Lordships.

The Committee formed on the 7th instant includes, in about equal proportions, Magistrates, Professional Men, Tradesmen conducting extensive business, and Practical Agriculturists. It is composed principally, but not exclusively, of Members of the Church of England.

Many of the promoters of the Prizes take an active part in another Society numbering above a thousand members, and having for one of its principal objects the diffusion of knowledge on subjects affecting Agriculture. Considerable interest on the subject of Middle Class Education has been awakened by the operations of this Society in the Western Counties, particularly in consequence of a memorandum written by Lord Ebrington and published in the Society's Journal, together with a Prize given to the young Farmer who should pass the best examination ; so that what is now proposed is likely to be well received in this district.

It cannot escape observation, that many persons in the middle ranks regard with jealousy and suspicion a Standard of Education for the poor, of which they themselves in their younger days had no experience ; and that the fact of their own children deriving no benefit from the large sums expended in providing a supply of trained Masters, is to them a source of dissatisfaction. It is stated moreover by intelligent Masters of Commercial Schools, that the inducements held out by the Government to Pupil Teachers and Certificated Masters tend to limit to an inconvenient degree the supply of competent Assistants for the Schools of the Middle Classes.

If it were possible to offer to the Middle Classes generally, on moderate terms, a sound English education, such as that given in Training Schools for Teachers under the inspection of their Lordships, it is believed that it would be hailed as a great boon, for which the annual charge would be readily defrayed.

But peculiar difficulties surround the attempt to found new Institu-

tions for this purpose at present, while other causes impede the endeavours made in certain localities to render existing Endowments as efficient for the desired end as they might be.

There is, however, good reason for believing that among the existing Masters of Commercial Schools are to be found men of integrity and ability, who only need to be supported and encouraged to give an education at once solid, liberal, and practical; that examinations, such as are proposed, would in some degree supply the required encouragement without provoking alarm as to undue interference; and that the principles of sound mental training would, as a natural consequence, be better appreciated by the parents of the boys.

The beneficial influence on the Elementary Education of the poor of such results, if attainable, needs no comment. That such results are likely to ensue has been shown by more than one experiment tried privately on a small scale.

In proposing a system of public examination, not confined to boys of one class, the promoters aim less at the advancement of any particular Art or Science than at the improvement of general education. This view is in accordance with the opinion of several most intelligent practical farmers, who take a very warm interest in the question.

It is therefore intended to require a certain degree of proficiency in general education as an indispensable condition for the receipt of a Prize in any branch of knowledge; and, more particularly, it will be stipulated that Candidates for distinction in *Practical Science or Art* (D) shall qualify themselves by previously passing with credit an examination either in *Language* (B) or in *Mathematics* (C).

Every Candidate, for whatever Prize, will be required to afford proof that his religious instruction has not been neglected. He will have the option of passing an examination of an elementary character in Religious Knowledge (A), to be conducted by Members of the Church of England, Lay as well as Clerical, or of producing a Certificate from some Minister of Religion in whom his Parents or Guardians place confidence. With this qualification the Prizes are open to all alike.

It is obviously of the highest importance that the Examinations should be conducted by persons of experience and sound judgment, whose friendly intentions and impartiality are above suspicion.

This character would be most effectually given to the examinations, if their Lordships should be pleased to allow such of Her Majesty's Inspectors as they may appoint to co-operate with a Board of Examiners locally appointed, and to report to their Lordships the results

of the examination with their opinion of the plans proposed, which at present can only be regarded as tentative and experimental. It would be desirable that the Inspectors should not be exclusively Clergymen.

The Examinations will probably be framed, as far as circumstances admit, on the model of the Examinations for Training Schools under inspection, and may be expected to be comprised within one week.

I am desired to add, that Lord Courtenay, Sir Stafford Northeote, together with the President, Sir John Kennaway, and the Secretary, have been deputed to communicate with their Lordships, should any further explanation be deemed desirable.

I have the honour to be, Sir,

Your obedient Servant,

T. D. ACLAND, Junr., Secretary.

R. R. W. Lingen, Esq.

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*Prospectus and Proposals issued by the Exeter Committee  
(referred to in the Letter to Mr. LINGEN).*

#### PROSPECTUS.

A strong and growing feeling pervades the heads of families in the middle ranks of society, that the interests of their children have been unprovided for, while great attention has been paid to the improvement of Education generally.

The Middle Classes bear the whole cost of the Education of their own children. They derive less aid from ancient endowments and from the public purse than any other branch of the community.

Training Colleges, Certificated Masters, Pupil Teachers, Industrial Schools, are in part supported by the Government, and their efficiency is secured by public examination. The standard of instruction is on every side rising, and the method of teaching made more effective.

The Education of the Gentry and Clergy, on the other hand, has engaged the prolonged and serious attention of Parliament. The Public Schools are tested by examinations, the Colleges contend with each other in a race of open competition, even the Universities themselves have been tried against the world in the examination for public appointments, and the soundness of their training has been nobly vindicated by the result.

Thus the parents of boys intended for the higher professions, and the managers of schools for the poor, have every advantage in judging of the efficiency of the Institutions from which they have to select instructors ; but with the Middle Classes it is otherwise : they have no such opportunity. The parent has not the security, nor the master the honourable independence, so essential to mutual confidence and to the welfare of the scholar.

Other evils might be spoken of in detail, but it is needless to enlarge on what every intelligent parent and every upright and competent Schoolmaster feel. Suffice it to say, that the remedy now suggested is founded on patient inquiry into facts and into the wishes of those most deeply interested.

Many reasons make it very difficult to found new Institutions, while there is much to hope from the endeavour to encourage and improve those which exist.

The present time is, in many respects, favourable to an attempt to supply, by voluntary efforts, the deficiency which has been complained of.

The memorandum on Middle Class Education, by Lord Ebrington, published in the fourth volume of the Journal of the Bath and West of England Society, accompanied as it was by a liberal offer of a prize of 20*l.* (which has already been once awarded and for which a second competition will take place next Easter), has caused much attention to be given to the subject in the West of England.

The recent pamphlet on ‘ County Education,’ by the Rev. J. L. Brereton, shows how much the subject has engaged the thoughts of one who takes the deepest interest in the prosperity of the agriculturist. Nor is it immaterial to refer to the strong opinion expressed by the Rev. F. Temple, H. M. Inspector of Training Schools, who was himself educated in a Devonshire School.

“ *The one thing which the middle classes want, AND WHICH THEY CANNOT GET WITHOUT HELP, is organization.* Let the schools remain self-supporting, but let the systematic action introduced by the Government into the working of elementary schools be extended to theirs ; let inspectors visit and examine ; let exhibitions and scholarships be founded ; let first-rate teachers be distinguished ; let the nation give as much money as will organize these schools into a system, and 50,000*l.* a-year would completely do it, and the middle classes can do the rest for themselves.”

The general arrangement acted upon by the Committee of

Privy Council on Education with reference to different religious communities, appears on the whole to have been accepted as the wisest course to be taken under present circumstances. It seems desirable (assuming this arrangement as a basis), to try how far the system of public examinations, so successful in other cases, may serve to distinguish among what are called Commercial Schools those which afford an Education at once solid, liberal, and practical.

The Schools intended are not, on the one hand, Charity Schools supported by the benevolent for the children of labourers; nor, on the other hand, Schools in which the Classical Languages are taught with a direct reference to the Universities. No absolute rule, however, defining or excluding particular schools, need be laid down; but the examination should be carefully framed with reference to the wants of the intermediate class, namely, the employers of labourers carrying on business with a view to profit, &c.

It must, however, be clearly understood that examination cannot secure religious and moral principles. What examination can and ought to do for a boy is to ascertain—first, whether he has learned anything accurately; secondly, whether his powers of mind have been called out and strengthened, so that he can apply what he knows to the business of his life.

Let examinations be strictly confined to this, their legitimate object, and many grounds of serious difference and fears of too much interference may be removed.

It is, therefore, proposed by a few gentlemen, concurring generally in the truth of the above statements, and impressed with the desirableness of an immediate attempt to remedy the evils complained of, to offer Prizes for competition in the West of England, as an experiment, for a limited period, in the conviction that, if the attempt meets with general approbation, it will be taken up on a larger scale.

#### PROPOSALS.

1. That Prizes be offered for competition to Boys educated in the West of England, with a view to employments in Agriculture, Arts, Manufactures, and Commerce.

2. The boys will be examined in two divisions: the age of the boys in the senior division not to exceed 18; in the junior division not to exceed 15 years.

3. The object aimed at is a good general education, in conformity with the common opinion of Englishmen, that skill in Farming, Handicraft, and Trade, is best acquired by practice.

4. Prizes will be offered in these departments:—

- a. Religious Knowledge.
- b. Language and Literature.
- c. Mathematics and Arithmetic.
- d. Practical Science and Art.

#### A. RELIGIOUS KNOWLEDGE.

The Examination in this department will be conducted by Members of the Church of England, Lay as well as Clerical.

#### B. LANGUAGE.

English Grammar. Analysis of Sentences. Writing from Dictation.

Latin, with special reference to the English Language.  
Modern Languages.

Some work of a Standard English Author.  
Geography in connection with History.

#### C. MATHEMATICS.

The Principles of Arithmetic. Elements of Algebra.  
Geometry. Trigonometry.  
General Principles of Natural Philosophy.  
Principles of Perspective.

#### D. PRACTICAL SCIENCE AND ART.

Mechanics in their application to Construction and Mechanism.  
Chemistry in connection with the Arts or Agriculture.  
Vegetable and Animal Physiology.  
Mensuration, Engineering, and Surveying.  
The Principles of Trade, including Book-keeping.  
Geography in connection with Commerce.  
Architecture, Drawing, Music.

5. No boy will be excluded from competing for any of the Prizes on the ground of the religious opinions of his parents; but

every Competitor for any Prize will be required to show that he is not wholly ignorant on this most important of all subjects, either by answering a reasonable number of the questions proposed for the Prizes in Religious Knowledge, or by producing a Certificate from some Minister of Religion in whom his parents or guardians place confidence, together with a letter from them declining the examination in Department A.

6. Every Competitor will be required to show that he can write well and spell correctly, and work the ordinary Rules of Arithmetic. Competitors may select their subjects in each department, and accuracy in a few subjects will be valued more highly than a superficial acquaintance with several.

7. The first Examination will be held in the Summer, 1857, at such town or towns as may be decided on.

8. Successful Competitors will be arranged in two Classes. Special Prizes may be awarded to individuals at the discretion of the Examiners.

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3. *Letter from R. R. W. LINGEN, Esq., to the Exeter Committee.*

SIR,

Privy Council Office, London, 25th Feb., 1857.

In reply to your letter of the 23rd ult. I am directed by the Lord President to inform you that his Lordship has instructed the Rev. F. Temple, who is personally known to you, and J. Bowstead, Esq., two of H. M. Inspectors of Schools, to afford assistance in giving effect to the scheme of Examinations and Prizes which was adopted at Exeter on the 7th ult.

You state that "the Examinations will be framed, as far as circumstances admit, on the model of the Examinations for *Training Schools under Inspection*." The Rev. Mr. Temple is the officer by whom the great majority of those institutions (for males) is inspected, and he is, besides, well acquainted, as you are aware, with the condition of the district from which the Candidates will be drawn.

Mr. Bowstead, sometime Fellow of Pembroke College, Cambridge, has been officially employed in the inspection of British and Protestant Dissenting Schools in the West of England, having previously acted as one of the Moderators at Cambridge, and as an Examiner in the office of the Committee of Council on Education.

Mr. Temple and Mr. Bowstead will be at liberty in the latter part of June.

The Lord President, in placing at your disposal the services of two gentlemen whose time is of the highest value, and in constant demand, for official purposes, relies upon your assurance that the Examination will be confined within one week. His Lordship also assumes that the entire execution of administrative details will be undertaken by the promoters.

The Inspectors will be ready to afford general advice, and to assist in setting, and in estimating, the Examination Papers; but all correspondence with candidates, engagement of rooms, arrangements for attendance, and the like, must be conducted by, and on the responsibility of, other persons.

Every expense also, of every kind whatever, beyond the presence of the Inspectors, must be defrayed without charge to the public.

The Lord President will not be able to authorize H. M. Inspectors to interrupt the course of their ordinary official duties by frequent journeys for purposes of conference, or heavy correspondence.

Should such a result ensue, his Lordship will be under the necessity of withdrawing his consent from the plan.

The Lord President hopes that it will not be necessary to continue the assistance of H. M. Inspectors permanently, but that such arrangements may be settled, in concert with them, as will admit their attendance to be hereafter dispensed with. Examinations of this kind were not contemplated in creating the Inspector's office, and, although his Lordship admits the bearing of them to be considerable upon the education of the lower, as well as upon that of the middle classes, nevertheless, his Lordship would prefer to see this indirect benefit accomplished without the extension of official agency.

Mr. Temple and Mr. Bowstead may always be addressed at this office. As Mr. Temple resides in London, you will probably find it convenient to address the correspondence (within the narrowest limits possible) to him, as often as it does not concern Mr. Bowstead only.

I have the honour to be, Sir,

Your obedient Servant,

R. R. W. LINGEN.

*T. D. Acland, Esq.*

*4. First Notice to Competitors, containing List of Prizes offered and General Regulations.*

P R I Z E S.

Prizes are offered to the amount of One Hundred and Twenty Guineas.

Candidates of sufficient merit will be arranged in two classes in each department.

Junior and senior Candidates will appear in the same classes, each being placed with reference to the standard fixed for their respective ages.

Prizes of 5*l.* in value (or thereabouts) will be given to all Candidates placed in the first class, of whom the number will be small, probably not exceeding three on an average in each department, or twelve in all.

Prizes of a smaller amount will be given to Candidates placed in the second class, which may include a larger number, perhaps from twenty to forty in all, according to the number and attainments of the Candidates.

Candidates in more than one department will be allowed to receive a Prize in each according to their merit.

A Prize of the value of Ten Pounds, in addition to the First Class Prizes of Five Pounds each, will be given to the Candidate in the senior division who shall pass the best general examination; and a Prize of the same amount, also in addition to First Class Prizes, will be also given to the Candidate in the junior division who shall pass the best general examination.

The Examiners will be at liberty to withhold Prizes if, in their judgment, no one is deserving of them.

It is possible that Prizes for excellence in particular subjects may hereafter be announced.

*Qualification of Candidates.\*—* Each Candidate will produce—

1. A declaration from his Parent or Guardian that he has been “ Educated in the West of England with a view to employment in Agriculture, Arts, Manufactures, or Commerce.” (See Proposal 1, page 109.)

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\* After much deliberation on the possibility of excluding particular schools from the competition the attempt was abandoned, and the proposed declaration was adopted as the most effectual and just method of defining the class for whom the prizes are intended: Pupil Teachers aided by Government are understood to be excluded; they have an examination and a career of their own.

2. The exact date of his birth, duly certified.
3. A statement of the places at which, and the persons by whom, he has been educated, and of the time passed under the charge of each instructor.

*Preliminary Examination.—*

All Candidates will be examined in writing from dictation, in the four First Rules of Arithmetic, and (if time permits) in reading aloud, before they are admitted to compete for any of the Prizes.

*Competitive Examination.—*

The examinations for Prizes will be conducted by means of papers of questions to be answered in writing. Good writing and general neatness will be taken into account in the answers to every paper.

Each Candidate will be required to pass an Elementary Examination in Religious Knowledge, or to produce a letter from his Parent or Guardian declining such Examination on his behalf, and enclosing a Certificate, duly filled up, of which the form will be supplied by the Secretary.

All Candidates for a Prize in Department D must have received a Certificate of competency from the Examiners in Department B, or in Department C, before their answers in Department D can be looked over.

*Arrangement of subjects for Examination.—*

The following outline may be given as indicating the probable course of the Examination, so far as it is in the power of the Committee to announce it before the Examiners shall have been appointed.

The Candidates will be arranged in two divisions, the age of those in the junior not to exceed 15 years, of those in the senior not to exceed 18. There will not be two sets of papers, but every paper will contain a variety of questions of different degrees of difficulty, so as to give considerable latitude for selection. Boys in the junior division will be entitled to Prizes by gaining a smaller number of marks for their answers than will be required from Candidates in the senior division in order to gain a similar Prize.

In order to encourage sound early training, the Examiners will be requested to attach especial importance to the elementary examination in each department; and with regard to the higher or special examinations, to "value more highly accuracy in a few subjects than a superficial acquaintance with several." (Proposal 6.) Candidates in the

junior division are therefore advised to prepare themselves especially for the elementary papers, though they are not precluded from attempting to answer the higher or special papers. Thoroughly good answers to the elementary papers will suffice to ensure them a very high position in the Class list. Candidates in the senior division are advised to concentrate their efforts on a limited number of subjects, taking especial care not to be disqualified by failure in the elementary examination, which, in each department, must be passed before attempting the higher examination in that department.

#### FIRST DAY.—PRELIMINARY EXAMINATION.

Reading, Writing, and Arithmetic, as above explained.

#### DEPARTMENT A, RELIGIOUS KNOWLEDGE.

##### I. Elementary Examination.—

Outlines of Old Testament History as contained in the Pentateuch, together with the principal Types and Prophecies of the Messiah.

A knowledge of the Book of Genesis will suffice.

The life and teaching of our Saviour as contained in the Gospels.

A knowledge of any one of the Gospels will suffice.

The Geography of the Holy Land.

A (general) acquaintance with the contents of the Book of Common Prayer.

The Examiners will be requested to confine their questions to such portions of the Prayer Book as may be presumed to be familiar to lay members of the Church of England (see Notice III.), and generally to direct attention by their questions to the meaning of words in common use in the Holy Scriptures and in religious books.

##### II. Higher Examination.—Questions to be answered on one or two, but not more than two, of the following periods:—

The History of the Israelites from their entrance into Canaan to their return from the Captivity.

The History of the New Testament from our Lord's Ascension to the end.

History of the Christian Church from the death of St. John to A.D. 325.

The Reformation in England, with the events connected with it before and after.

**SECOND DAY.—DEPARTMENT B, LANGUAGE AND HISTORY.****I. Elementary Examination.—**

English Grammar, parsing, analysis of sentences, meaning and derivation of words.

**Outline of History and Geography of the British Empire.**

Some questions will be proposed in the Elementary Examination, in answering which a knowledge of French and Latin will be of use; but a creditable examination may be passed without the knowledge of those languages.

**II. Higher Examination.—**

After passing the Elementary Examination in Language and History, Candidates may select one or two, but not more than two, of the following subjects:—

1. English Literature.
2. Latin (with Ancient History).
3. French, or other modern language.

In English, an opportunity for original composition on some familiar subject will be given.

In Latin, the object will be to test the knowledge of the Candidates with reference to broad general rules, rather than to exceptions; and less with a view to future scholarship than to present mental training and the illustration of English.

In French, as in Latin, attention will be given to general principles of Grammar; but the power of using French for practical purposes will be also tested by composition in that language.

If Candidates desire to be examined in German or Italian, they are requested to give notice as early as possible.

**THIRD DAY.—DEPARTMENT C, MATHEMATICS.****I. Elementary Examination.—**

Arithmetic—including Vulgar and Decimal Fractions.

Algebra—Elementary Rules, Simple Equations.

Geometry—Euclid, Books I. II. III.

**II. Higher Examination.—**

After passing the Elementary Examination in Arithmetic and Mathematics, Candidates will have an opportunity of showing either their further proficiency in Mathematics as a Science, or their acquaintance

with its applications. According to their previous studies they may select either of the following papers:—

1. Arithmetic, Algebra, Geometry, continued.
2. One or more of such subjects as Interest, Annuities, Measurement, Mechanics, Navigation, &c.

#### FOURTH DAY.—DEPARTMENT D, PRACTICAL SCIENCE AND ART.

##### I. *Elementary Examination.*—

The object of this part of the examination is to call attention to facts of general application in the material world as a foundation for special experience.

It will include practical construction of simple forms (without Mathematical proof), common properties of bodies, and Physical Geography.

II. *Special Examination.*—After passing the Elementary Examination in Science or Art, Candidates may choose between papers prepared with a view to their respective future employments. Some questions, such as those relating to Book-keeping, Building, Machinery, will enter into more than one paper, so that each Candidate may have an opportunity of answering them: the papers will be arranged under three heads:—

1. Agriculture.
2. Commerce and Manufactures.
3. The Arts.

In addition to, or in lieu of, either of these special papers, Candidates may be examined generally in Music or Drawing.

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The subjects of the several parts of the examination are purposely stated here in very general terms, lest the multiplicity of subjects named should cause confusion, or give rise to unfounded apprehension of the difficulties of the examination. The subjects enumerated are not put forward as a suitable scheme of instruction for any one student. The Committee are only desirous that all the Candidates, however taught, should have an opportunity of being examined in what they have respectively learned: and that their detention at the place of examination, consistently with this object, should be as short as possible.

*N.B.*—Further particulars (contained in a supplementary paper)

may be obtained on application to the Assistant Secretary, together with suggestions as to books by which Candidates may be assisted in their studies.

T. D. ACLAND, Junr., Secretary.

197, High-street, Exeter, February 17, 1857.

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5. *Second Notice to Competitors, explanatory of Regulations, with further details of Subjects for Examination.*

The *Notice to Competitors, No. I.*, contains the general regulations to be observed by Candidates, an outline of the course of examination, and the list of Prizes offered.

This paper, *No. II.*, is intended to give some general explanations of the intention of the regulations, and further detail as to the subjects of examination.

*General Regulations.*—Great difficulty attends the attempt to define the class of schools from which Candidates ought to be received: for the present no such attempt is made; the intended occupation of the Candidate as declared by the parent being proposed in lieu of any definition of the Schools. The Committee reserve to themselves the power of admitting or excluding Candidates in special cases, or of laying down any further rule on the subject.

It is not necessary that Candidates should be pupils in a school at the time when they offer themselves for examination: one of the objects aimed at is, to encourage youths to carry on the work of self-education after leaving school.

*Preliminary Examination.*—This is merely intended to discover palpable deficiency in the rudiments, should it unexpectedly exist, in order to save any Candidate who may be so deficient from incurring, with no chance of success, needless expense.

*Elementary Examination in each Department.*—This is distinct from the preliminary examination. The value to be attached to the questions in this part of the examination will be so high, that completeness and accuracy in the answers will secure, at least to boys in the junior division, a high position in the class list.

*Higher or Special Examination in each Department.*—In every case more subjects are included under this head than any one candidate is expected to be examined in. In order to discourage superficial know-

ledge, it has been decided that Candidates must gain a certain fixed number of marks on each subject, or the marks gained on that subject will not be reckoned in their favour. It will therefore be better to answer on one or two subjects completely, than to answer imperfectly on several.

In every Department a certain number of marks must be gained in the Elementary Examination before the answers to questions in the higher or Special Examination in the same Department can be looked at.

In the case of Department D (Science and Art) a certain minimum standard must have previously been attained either in Department B (Language and History), or in Department C (Mathematics;) the Candidate selecting whichever of those two (B or C) he prefers.

In the case of Department A, provided there has been no failure in the Preliminary Examination, a prize may be gained without reference to any other Department. It cannot be doubted that the diligent study of the subjects included in this Department will cultivate the mind, and that youths who have no time for secular study should be encouraged to improve themselves in religious knowledge.

It may save trouble to Candidates to point out the effect of the above regulations on the Examination in each Department.

All Candidates in A will have to pass—

1. The Preliminary Examination.
2. The Elementary Examination in A.

All Candidates in B or C will have to pass—

1. The Preliminary Examination.
2. The Elementary Examination in A (unless declined under Rule 5).
3. The Elementary Examination in B or C, as the case may be.

N.B. No Candidate is obliged to be examined both in B and C, unless he wishes to compete for Prizes in both those Departments.

All Candidates in D will have to pass—

1. The Preliminary Examination.
2. The Elementary Examination in A (unless declined under Rule 5).
3. The Elementary Examination in B or C.
4. The Elementary Examination in D.

Except as above provided, Candidates are at liberty to select any one of the Departments of the Examination.

## FIRST DAY.—PRELIMINARY EXAMINATION.

Reading, Writing, and Arithmetic, as above explained.

## DEPARTMENT A, RELIGIOUS KNOWLEDGE.

The particulars given under this department were repeated verbatim from the first notice. For further particulars see Final Notice below.

## SECOND DAY.—DEPARTMENT B, LANGUAGE and HISTORY.

I. *Elementary Examination.*—

Same as in First Notice. Page 116.

II. *Higher Examination.*—Alternative papers, one or two, but not more than two, of which may be answered.

| ENGLISH LITERATURE.                                                                | LATIN.                                                                                                                                             | FRENCH.                                            |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Passages from works of celebrated Authors to be explained.                         | A passage of Cæsar or Virgil to be construed. Grammatical Questions. The Accidence and a few leading rules of Syntax well understood will suffice. | A passage of French to be translated into English. |
| Questions as to the times in which the Authors lived—their lives, and other works. | Outline of Ancient History.                                                                                                                        | A passage of English to be translated into French. |
| Outline of the history of English Literature.                                      |                                                                                                                                                    | Genders of nouns—tenses of verbs, &c.              |

## THIRD DAY.—DEPARTMENT C, MATHEMATICS.

I. *Elementary Examination.*

Same as in First Notice. Page 116.

II. *Higher Examination.*

## 1. Arithmetic. Properties of Numbers.

Algebra, including Quadratics, Ratios, and Logarithms.

Geometry, Euclid to end of Book VI.

Trigonometry.

## 2. Interest, Annuities, &amp;c.

Mensuration and Surveying. The use of Logarithms.

Elements of Natural Philosophy treated Mathematically.

Navigation; Popular Astronomy; and Mathematical Geography.

Candidates may obtain the highest credit by good answers to either of these sections 1 and 2; but as it is not desirable in an examination of this kind to draw too strict a line between pure and applied Mathematics, Candidates may answer questions in both sections.

#### FOURTH DAY.—DEPARTMENT D, PRACTICAL SCIENCE AND ART.

I. *Elementary Examination.*—One or more of the following subjects: Elements of Natural Philosophy (treated experimentally), of Chemistry, and of Physiology.

Laws of Colour, and practical construction of Geometrical Forms. Physical Geography.

The object of this examination is to encourage an acquaintance with principles and facts of general application as a foundation for special experience. Candidates in this department must have previously passed in B or C (see above).

II. *Special Examination.*—Alternative papers, according to the employment for which the Candidate has been educated.

See general remarks on the higher or special examinations above.

| AGRICULTURE.                                                                                                                     | COMMERCE AND MANUFACTURES.                                                                                                                                         | THE ARTS.                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chemistry applied to Agriculture.<br>Buildings. Machinery<br>Bookkeeping.<br>Land surveying.<br>Principles of Trade.<br>Geology. | Chemistry applied to Manufactures.<br>Machinery.<br>Bookkeeping.<br>Weights and Measures,<br>English and Foreign.<br>Principles of Trade.<br>Commercial Geography. | Qualities of Materials<br>used in the Arts.<br>Principles of Construction.<br>Builders' Arithmetic.<br>Styles of Architecture.<br>Principles of Ornament.<br>Principles of Music. |

Either in addition to or in lieu of any of the above special papers, Candidates may be examined generally in Music or Drawing.

NOTE.—It will be observed that the above arrangement of subjects is adopted with a view to considerations of convenience and practical utility, and not with regard to scientific division. Some subjects are therefore introduced in more than one Department.

“The first examination will be held in the summer 1857, at such town or towns as may be decided on.”—Prop. 7.

Further notice of the time and place of examination will be given to all who signify their intention of becoming Candidates for the Prizes.

T. D. ACLAND, Junr., Secretary.

Exeter, February 20th, 1857.

6. *Third (Final) Notice to Competitors, containing a more exact definition of the limits of the Examination.*

It is now possible to define more exactly the nature and the limits of the Examination in each department.

DEPARTMENT A.

I. *Elementary Examination.*—

The Questions on the Holy Scriptures will be chiefly taken from the Book of Genesis and the Gospel of St. Mark, and only the Geography of those places will be required which are mentioned in these Books.

The Questions on the Book of Common Prayer will be taken entirely from the usual Sunday Services and the Catechism.

II. *Higher Examination.*—

The Questions on the Holy Scriptures will not be such as to require critical knowledge, but rather such as to test whether the Candidates have read the Bible with care and thought.

The Questions on Church History will be such as can be answered from Burton's Three First Centuries, and Massingberd's History of the Reformation in England; but Candidates who have read other similar books will find no difficulty in consequence.

DEPARTMENT B.

I. *Elementary Examination.*—

Seven or eight lines of easy English Poetry will be given to be parsed in the usual way, and to be analysed on the method of Morell's Analysis of Sentences. The Questions on Derivation will be confined to the ordinary Affixes and Prefixes.

The Questions on History will be confined to the three or four leading events in each reign. The dates of these events, and a very brief statement of their causes and consequences, will be required.

In Geography, Candidates will be expected to draw a Map of some part of Great Britain from memory, to mention the chief Trade of some of the principal Towns in Great Britain, and the Situation and the two or three chief Products of some of the British Colonies.

II. *Higher Examination.*—

1. *English Literature.*—Candidates will be examined in one (and one only) of the following Books, at their option:—

Shakespeare's Julius Cæsar.

Milton's Paradise Lost. Books I., II., III.

Goldsmith's Traveller and Deserted Village.

Cowper's Task.

Passages will be given to be parsed, analysed, and paraphrased. Questions will be asked on the subject-matter of the Book, on the Author's life and his other writings, and on the names and works of authors who lived about the same time.

*2. Latin.*—Passages will be given for translation from—

Cæsar de Bello Gallico.

Virgil. Georgic I. and Æneid I. and II.

Some words from the passages given will be selected for parsing.

The Questions from Ancient History will be confined to such as can be answered from Landmarks of Ancient History, White's Elements, or any similar manual.

*3. French.*—A Passage from a French Newspaper will be given for Translation into English, and words in the passage will be selected for parsing.

A Passage from an English Newspaper will be given for Translation into French.

#### DEPARTMENT C.

*I. Elementary Examination.*—

The Arithmetic and Geometry are sufficiently defined. (See First Notice, p. 116.) The Algebra will be confined to the four Elementary Rules, Involution, Evolution, Greatest Common Measure, Simple Equations involving two unknown quantities, and Problems producing Simple Equations.

*II. Higher Examination.*—

The Arithmetic is sufficiently defined. The Algebra will include Surds, the Binomial Theorem, Quadratic Equations involving more than one unknown quantity, Problems producing Quadratic Equations, Ratios, and Logarithms. Some easy Problems will be set in Geometry, besides Propositions to be written out. The Trigonometry will not include what is usually called Analytical Trigonometry.

Interest, Annuities, &c.—Lund's Algebra, last part.

Mensuration and Surveying.—Tate's Mensuration.

Logarithms. Chambers's Mathematical Tables.

Natural Philosophy.—Tate's Natural Philosophy, vol. I.

Navigation.—Inman, chapter I.

Popular Astronomy.—Arago's Astronomy by Tomlinson.

Mathematical Geography.—Sullivan's Geography Generalised.

These Books are merely mentioned as defining the extent of the examination. Candidates who have learnt the same subjects in other books will not find themselves at any disadvantage.

#### DEPARTMENT D.

##### I. *Elementary or General Examination.*—

The Elementary Examination will differ in purpose from the corresponding examination in the other departments: it will not be elementary in the sense of taking a lower standard, but only in the sense of being confined to general principles, and not touching on special applications.

The Questions will be such as can be answered after a study of Tate's Elementary Course of Natural and Experimental Philosophy, Wilson's Chemistry, Chambers's Physiology, Redgrave's Manual of Colour, Hughes's Physical Geography.

##### II. *Special Examination.*—

The chief purpose of this examination will be to ascertain whether those who have mastered the general principles belonging to this department can readily apply them to the use required in Agriculture, Manufactures, Commerce, or the Arts.

###### i. AGRICULTURE.—The examination will embrace Questions on—

1. Land Surveying and Levelling, such as can be answered by aid of a knowledge of Tate's or any similar Manual of Mensuration. The Principles of Draining and Irrigation.
2. Mechanics applied to Agriculture: viz.—
  - a. The Mechanical Principles illustrated in Farm Labour, Farm Tools, and the like.
  - b. The construction and action of Agricultural Machines, as a Pump, a Threshing Machine, the arrangements of a Flour Mill or of Barn Machinery, Water Wheels, or the like.
3. Chemistry and Physiology applied to Agriculture and Gardening: viz. the explanations of the Rotation of Crops, of Manures, and of the modes of Housing and Feeding Stock. Some Questions on the Theory of Horticulture.

4. Agricultural Geography. Under this head are included—
  - a. Such a knowledge of the chief Agricultural products of the world, and of those of the British Colonies in particular, as may be obtained by an intelligent study of Hughes's Manual of General Geography, or some similar book.
  - b. A knowledge of the different Modes of Farming, and the different Breeds of Stock, peculiar to different parts of Great Britain.
  - c. Some knowledge of the principal Geological Strata of the West of England, and of the Causes of its Climate. (See Whitley's articles in the Bath and West of England Journal, and his Agricultural Geology.)
5. Principles of Trade—that is, the Causes on which depend Wages, Prices, Rents, and Profits.

ii. COMMERCE and MANUFACTURES.—Questions will be set on—

1. The principles of Bookkeeping as they may be learnt from Chambers's Treatises.
2. Mechanics applied to Manufactures. But as the thorough study of one Machine is the best preparation for understanding all Machines, the Questions here will be confined to the Steam Engine, as used in Mines, Factories, Steamboats, and Railways.
3. Chemistry applied to Commerce, to include—
  - a. The Chemical processes involved in Baking, Brewing, Cider-making, Dyeing, Soap-making, and Distilling.
  - b. The most common adulterations, and the readiest means of detecting them.
4. Commercial Geography, to include—
  - a. Such a knowledge of the Trade of the World, and especially of that of the British Colonies, as may be obtained by an intelligent study of some manual like Hughes's General Geography.
  - b. A particular knowledge of the chief Seats of Trade and Manufacture in Great Britain, and of the reasons which have placed them where they are. (See Map of "Occupations" by National Society.)
5. Principles of Trade as before.

iii. THE ARTS.—This will embrace the useful and decorative Arts.\*

1. *Materials.*—Questions will be asked as to the qualities of different kinds of Timber, Stone, and the substitutes for stone; Iron, cast and wrought, and other metals; the uses for which they are severally adapted, and the style of ornament best suited to each.
2. *Principles of Construction.*—The application of the mechanical principles of tension and pressure to the construction of walls, arches, roofs, partitions; the names and uses of the parts of each. The questions will be such as may be answered after the study of Dobson's Rudimentary Art of Building, in Weale's Series.
3. *Builder's Arithmetic.*—Under this head, Questions will be set on the Modes of measuring and valuing Work done, as adopted by Builders.
4. *Styles of Architecture.*—Candidates will have an opportunity of drawing one of the orders of Classical Architecture, or a Gothic window with its appropriate mouldings. Questions will be asked as to the distinguishing features of styles, their dates, the advantages and disadvantages of each with regard to the different purposes of structures. Names of parts of buildings will be proposed for definition, and may be illustrated by free hand sketches.
5. *Principles of Ornament.*—Questions will be asked which may be answered after a study of such books as Mr. Redgrave's Manual of Colour; Field on Colour (Weale's Series); Mr. Owen Jones's Propositions on Decorative Art; Lindley's Symmetry of Vegetation. The answers may be illustrated by sketches of buildings, furniture, glass, crockery, or by patterns for paper-hangings and textile fabrics.

iv. DRAWING AND PERSPECTIVE.—Simple geometrical forms, such as triangles, oblongs, circles, ellipses, to be drawn.

Drawings to be made from some common object, such as a block of wood, a box, a chair, a table, a leaf, or from a plaster cast. Some common object to be drawn from memory.

\* It will be understood that what are called the Fine Arts hardly enter into the scope of these examinations, except so far as Drawing and Music form part of general education.

The Candidates will be at liberty to select subjects for themselves, and to draw in any way and with any material they may prefer.

A simple ground-plan and elevation of a house being given, to make a drawing of the same in perspective. Explanations of the common terms and principles of Perspective such as may be gathered from the Illustrated London Drawing-book, by Scott Burn.

v. MUSIC.—Questions\* will be proposed on—

The ordinary musical notation, the stave and the intervals; on the keys, the fundamental chords, discords and their resolutions, and on the meaning of musical terms in common use.

Any easy piece of music will be given to be transposed, analysed, or harmonized.

Most of the questions will be such as can be answered by those who have studied Hullah's Manual of Vocal Music and Grammar of Musical Harmony, chapters i. to xx.; or Burrowes' Thorough-Bass Primer; or the first part of Child Spencer's Rudimentary Treatise, in Weale's Series.

*N.B.* Candidates are advised, after reading through this Notice, to read over again Notices I. and II., and to pay particular attention to what is said about the elementary examination, and about the importance of not attempting too many subjects. They will have plenty of answers to choose from under each head.

The Examination will commence on the 16th June, at Exeter.

Candidates should send in their names at once, that they may be furnished with Forms which they will have to fill up and to return during the month of April.

It has been resolved that Candidates from the counties of Cornwall, Devon, and Somerset, shall be eligible to compete for the Prizes.

The Secretary has been informed that the Liskeard Board of Education has resolved to grant Two Pounds towards the expenses incurred at the Examination by any Candidate educated at a School in union with that Board. It is hoped that this example may be imitated in other parts of the West of England.

\* Mr. Hullah has been kind enough to say that he will be ready to undertake a *vivā voce* examination in practical skill.

It has also been suggested that local contributions might be raised for the special purpose of assisting Candidates who might be deterred by the expense from coming forward. It does not seem reasonable that this expense should be thrown upon the Masters.

T. D. ACLAND, Junr., Secretary.

H. MITCHELL, Curate of Silverton, near  
Cullompton, Assistant Examination  
Secretary.

*Exeter, March 14, 1857.*

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#### 7. *List of Books prepared by the SECRETARY.*

The following List is intended to bring under the notice of candidates for prizes a few books of acknowledged merit, and in most cases of remarkably low prices.

They are not put forward with any authority as text-books, required to be got up for the examination, nor are the examiners in any way bound to confine themselves to the matter contained in them.

They are for the most part in common use in some of the best elementary schools, in training schools, or other public institutions.

It may also be useful to parents engaged in the education of their own children to be made aware of the fact that many of the books published by societies with a view to the education of the poor are in constant use in private families of the very highest social position.

They are so used because no other books are found to be so well adapted to the minds and habits of young children of whatever rank.

The present List has been prepared by the Secretary at the suggestion of the Examination Committee, and with the advice of experienced teachers, but he is singly responsible for the List as now printed.

T. D. ACLAND, Junr., Secretary.

*Exeter, March 14th, 1857.*

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\* \* \* The Books marked S. P. C. K. are published by the Society for Promoting Christian Knowledge; those marked N. S. by the National Society for Education; those marked R. T. S. by the Religious Tract Society: the whole of the Books on the List may be obtained by order of any Bookseller.

### Holy Scriptures.

- Nicholls' Help to Reading the Bible. 12mo., 2s. 8d. *S. P. C. K.*  
 Pinnoch's Analysis of Scripture History (Old Testament). 18mo., 3s. 6d. *Hall and Son.*  
 Ditto ditto (New Testament). 18mo., 4s. *Hall and Son.*  
 Bible Narrative, by Miss Zornlin. 12mo., 5s. *Parker and Son.*  
 Palestine, and other Scripture Geography. 18mo., 1½d. *N. S.*  
 Hughes' Bible Atlas. 12mo., 1s. 6d. *Longman.*  
 Manners and Customs of the Jews. 18mo., 1s. 6d. *R. T. S.*

### Liturgy and Catechism.

- Nicholls' Sunday Exercises on the Morning and Evening Prayer. 12mo., 2d. *S. P. C. K.*  
 Sinclair's Questions on the Morning and Evening Prayer. 12mo., 4d. *S. P. C. K.*  
 Scripture Proofs and Illustrations of the Catechism. 12mo., 2d. *S. P. C. K.*  
 Questions illustrating the Catechism, by Archdeacon Sinclair (containing an excellent Glossary). 12mo., 4d. *S. P. C. K.*

### Church History.

- Pinnoch's Analysis of Ecclesiastical History to A.D. 825. 18mo., 3s. 6d. *Hall and Son.*  
 Burton's History of the Christian Church. Feap. 8vo., 5s. *Parker and Son.*  
 Pinnoch's Analysis of the History of the Reformation, with prior and subsequent History of the Church of England. 18mo., 4s. 6d. *Hall and Son.*  
 Blunt's History of the Reformation. Feap. 8vo., 3s. 6d. *Murray.*  
 Massingberd's History of the Reformation. 12mo., 6s. *Parker and Son.*

### English Grammar.

- Explanatory English Grammar, by M'Leod. 18mo., 1s. *Longman.*  
 Elements of Grammar, English, by Rev. E. Thring. 18mo., 2s. *Macmillan.*  
 Manual of English Grammar, by Rev. J. Hunter. 12mo., 7d. *N. S.*  
 Latham's Grammar for Commercial Schools. 1s. 6d. *Walton and Maberly.*  
 English Grammar, by Lennie (much used in private schools, but not recommended). 18mo., 1s. 6d. *Oliver and Boyd.*  
 Spelling Book superseded, by Sullivan. 18mo., 1s. 4d. *Longman.*  
 Analysis of Sentences, by J. D. Morell. 12mo., 2s. *Longman.*

### English History.

- History of England (last edition). 12mo., 1s. 4d. *S. P. C. K.*  
 England and its People, by Emily Taylor. 3s. 6d. *Houlston.*  
 Kings of England. 1s. *Mozley.*  
 History of England, by Rev. T. Milner. 5s. *R. T. S.*  
 Gleig's School and College History of England. 6s. *Parker and Son.*

### Geography.

- Hughes' Manual of British Geography. Feap. 8vo., 2s. *Longman.*  
 Hughes' Manual of Geography, Physical, Industrial, and Political. Feap. 8vo.  
 7s. 6d. *Longman.*  
 Sullivan's Geography Generalized. 2s. *Longman.*  
 Guyot's Earth and Man. Feap. 8vo., 2s. *Parker and Son.*  
 Maps illustrative of the British Empire, by Rev. S. Clark, Principal of Battersea College. 6d. each. *N. S.*

### English Literature.

- Reed's English Literature : Chancer to Tennyson. Post 8vo., 2s. *Shaw.*  
 Reed's English History illustrated by Shakspeare. Post 8vo., 2s. *Shaw.*  
 Spalding's History of English Literature. 3s. 6d. *Simpkin.*  
 Milton. 1s. 6d. *Ingram.*  
 Shakspeare (Stratford edition). Any vol. 2s. *Hodgson.*  
 Cowper's Poetical Works. 1s. 6d. *Griñin and Co.*  
 Goldsmith's Poetical Works. 2s. 6d. *Knight and Son.*  
 Craik's Outlines of the History of the English Language. 3s. 6d. *Chapman and Hall.*  
 Hooker's First Book (concerning Laws in general). 12mo., 1s. 6d. *Parker and Son.*  
 Bacon's Advancement of Learning. 12mo., 2s. *Parker and Son.*

### Latin: and Ancient History.

- Kennedy's Latin Primer (the Accidence and Syntaxis Minima). 12mo., 2s. *Longman.*  
 Kennedy's Elementary Latin Grammar. 12mo., 3s. 6d. *Longman.*  
 Kennedy's Vocabulary (excellent for origin of Words in English). 12mo., 3s. *Longman.*  
 Walford's Shilling Latin Grammar (founded on the Charterhouse Grammar). 12mo., 1s. *Longman.*  
 Jacobs' Latin Reader (Prose), for Little Boys. 12mo., 3s. *Fellowes.*  
 Thring's Construing Book (Verse), for Little Boys. 18mo., 2s. 6d. *Macmillan.*  
 Virgil, with Notes (Chambers' Educational Course). 2 vols., 3s. 6d. each.  
 Virgil (Oxford Classics): no Notes. 2s. 6d. *J. H. and J. Parker.*  
 Cæsar (Eton). 2s. *Simpkin.*  
 Landmarks of Ancient History. 12mo., 2s. 6d. *Mozley.*  
 First Steps in Classical Geography, by Professor Pillans. 12mo., 1s. 6d. *Longman.*  
 The Georgics of Virgil, translated by Rev. J. King, of Cutcombe (the work of a practical farmer and scholar). 12mo., 4s. 6d. *Rivington.*

### Arithmetic \* and Mathematics.

- Colenso's Arithmetic. 12mo., 4s. 6d. *Longman.*  
 Colenso's Elementary Arithmetic, with Questions. 18mo., 2s. 3d. *Longman.*  
 Cornwell and Fitch's Arithmetic. 12mo., 4s. 6d. *Simpkin.*  
 Tate's Arithmetic. 12mo., 1s. 6d. *Longman.*  
 Tate's Mathematics for Working Men. 8vo., 2s. *Longman.*  
 Tate's Geometry and Mensuration. 12mo., 3s. 6d. *Longman.*

\* To this list should be added the Arithmetic of Rev. Barnard Smith.

- Mensuration (Irish Board). 12mo. 6d.  
 Lund's Course of Algebra. Fcap. Svo., 2s. 6d. *Longman*.  
 Lund's Geometry as an Art. Fcap. Svo., 2s. *Longman*.  
 Lund's Geometry as a Science. Fcap. Svo., 1s. 6d. *Longman*.  
 Potts' Euclid (First Book). 12mo. 6d. *N. S.*  
 Potts' Euclid (First three Books). 1s. 6d. *N. S.*  
 Cassell's Euclid. Post Svo., 1s. 6d. *Kent*.  
 Rudimentary Navigation (Weale's Series). 12mo., 2s.  
 Inman's Navigation. Svo., 6s. *Rivington*.  
 Heather on Mathematical Instruments (Weale's Series). 12mo., 1s.

### Natural Science.

- Tomlinson's Natural Philosophy. 1s. *Weale's Series*.  
 Tate's Exercises on Mechanics and Natural Philosophy. 12mo., 2s. *Longman*.  
 Baker's Elements of Mechanism. 1s. *Weale's Series*.  
 Tate's Elements of Mechanism. 12mo., 3s. 6d. *Longman*.  
 Tate's Popular Astronomy and Use of the Globes. 1s. *Gleig's Series*.  
 Tate's Little Philosopher. 18mo., 3s. 6d. *Longman*.  
 Lee's Catechism of Natural Philosophy. 2 Parts, 9d. each. *Oliver and Boyd*.  
 Rudimentary Chemistry, by Fownes, with Agricultural Chemistry, by Tomlinson, 12mo., 1s. *Weale's Series*.  
 Wilson's Chemistry (Chambers' Educational Course). 12mo., 3s.  
 Stockhardt's Experimental Chemistry. 5s. *Bohn*.  
 Stockhardt's Agricultural Chemistry. 5s. *Bohn*.  
 Physiology, also Natural Philosophy: see Fifth Book of Lessons (Irish Board). one of the cheapest books in existence. 500 pages for 8d.  
 Chambers' Rudiments of Animal Physiology. 1s. 6d.  
 Chambers' Rudiments of Vegetable Physiology. 1s. 6d.  
 Henslow's Physiological Botany. 3s. 6d. *Longman*.  
 The Steam Engine, by Lardner. 1s. *Weale's Series*.

### Political Economy and Trade.

- Book-keeping (Irish Board). 4½d.  
 Lessons on the Phenomena of Industrial Life, by Rev. R. Dawes, Dean of Hereford. 12mo., 2s. *Groombridge*.  
 Easy Lessons on Money Matters, by Archbishop Whately. 1s. *Parker and Sons*.

### The Arts and Music.

- Burchett's Definitions of Geometry. 5d. *Chapman and Hall*.  
 Burchett's Practical Geometry. 8vo., 5s. *Chapman and Hall*.  
 Practical Geometry for Schools and Workmen. 12mo., 1s. 6d. *Groombridge*.  
 Redgrave's Manual of Colour. 9d. *Chapman and Hall*.  
 Field on Colour. 2s. *Weale's Series*.  
 Rowbotham's Guide to Sketching and Perspective. 1s. *Winsor and Newton*.  
 Chambers' Drawing-Books. First and Second Series. 1s. each.  
 Dobson's Rudiments of the Art of Building. 1s. *Weale's Series*.  
 Burn's Illustd. Architectural and Engineering Drawing-Book. 2s. *Ward and Lock*.  
 Hullah's Manual of Singing. 2s. 6d. *Parker and Son*.  
 Hullah's Grammar of Musical Harmony. 3s. *Parker and Son*.  
 Spencer's Treatise on Music. 2s. *Weale's Series*.

Miscellaneous (not School Books) for Teachers and older Students.

- Procter on the Book of Common Prayer. Crown Svo., 10s. 6d. *Macmillan.*  
Blunt's History of the Christian Church during the First Three Centuries. 8vo., 9s. 6d. *Murray.*  
Craik's English of Shakspeare, illustrated in the Tragedy of 'Julius Cæsar.' Feap. 8vo., 7s. 6d. *Chapman and Hall.*  
Trench on the Study of Words. Feap. 8vo., 3s. 6d. *Parker and Son.*  
Trench's English Past and Present. Feap. 8vo., 4s. *Parker and Son.*  
Annals of England. 3 vols. feap. Svo., 5s. each. *J. II. and J. Parker.*  
Goodwin's Course of Mathematics. 8vo., 15s. *Deighton.*  
Herschel's Discourse on Natural Philosophy (Lardner's Cabinet Cyclopædia). Feap. 8vo., 3s. 6d. *Longman.*  
Swainson's Discourse on Natural History. Feap. 8vo., 3s. 6d. *Longman.*  
Dr. Golding Bird's Natural Philosophy. 12s. 6d. *Churchill.*  
Fownes' Manual of Chemistry. 12mo., 12s. 6d. *Churchill.*  
Lardner on the Steam Engine. Post Svo., 8s. 6d. *Walton and Maberly.*  
Johnston's Elements of Agricultural Chemistry. Feap. 8vo., 6s. 6d. *Blackwood.*  
Agricultural Geology, by Whitley of Truro. 8vo., 7s. 6d. *Longman.*  
Agassiz and Gould's Comparative Physiology. Post Svo., 5s. *Bohn.*  
Milne Edwards' Manual of Zoology. 7s. 6d. *Renshaw.*  
Balfour's Outlines of Botany. 12mo., 7s. 6d. *Black.*

## LOCAL ARRANGEMENTS

## FOR THE EXAMINATION AT EXETER.

IT will probably save trouble to others hereafter to state the arrangements made for the assembly of the Candidates at the Examination.

Three respectable innkeepers undertook to provide candidates with single beds and three meals per day, attendance included, at the several charges of 5s. 6d., 6s., and 6s. 6d. each per day. The Committee gave this information to the Candidates, incurring no further responsibility, and leaving them to make their own arrangements. Many, as might have been expected, were received in private families. Every Candidate was requested on his arrival to report his place of residence to the Secretary, from whom he learned the number by which he would be distinguished during the Examination.

Two spacious rooms were engaged for the Examination at the Clarence Hotel. One was used for the examination on paper, the other for the examination in reading aloud. With a view to remove all air of mystery, and to satisfy public interest, the friends of the youths and a few other persons interested in the examination were allowed access to both rooms. Considering that it was the first experiment of the kind, the advantages of this course predominated over the disadvantages; in future it will probably be desirable to confine the attendance of strangers to the room in which the examination *vivâ voce* is being conducted.

The arrangement of the room devoted to paper work, having been quite successful, may furnish some useful hints. It was a back room not opening into a street, lofty, well lighted, with a northern aspect. The candidates were placed in rows facing the Examiner, who was on an elevated platform, with a raised seat, at one end of the room. The senior candidates at the end furthest from the Examiner. The candidates had the light on their left hand, a point not to be disregarded, especially with reference to an examination in Drawing. There was an interval of nearly two clear feet between each candidate and his neighbour: no two candidates from the same school sitting side by side—an arrangement easily effected, by giving even numbers to the candidates from the most numerous schools, amounting to about half the whole number entered for examination, and filling up the odd numbers between from other schools. The desks

were made of two deals placed on simple tressels, and covered with blue serge. Each boy's number was nailed to the desk by the side of his inkstand, 120 penny inkstands having been placed at the proper intervals, and prevented from falling by an india-rubber band and two tin tacks. The Candidates were supplied with half-sheets of foolscap paper, ruled on one page; and they were desired to write on the ruled page only, leaving on the left hand a margin of an inch on which the number of each question was to be written. At the head of every page the Candidate's own number was to be written, under the penalty that the answers would not be looked at if compliance with this condition were neglected.

The half-sheets, at the end of each part of the Examination, were to be brought by each boy to the Secretary's table, and were immediately arranged in the order of the numbers held by the boys respectively, placed between two pasteboards of the size of foolscap with two india-rubber bands, marked with the name of the subject, and delivered to the Examiners. Attention to uniformity in a few simple matters saves much time and trouble in looking over the answers to the questions, and comparing the results.

The entire expense incurred at the Examination is stated below:—

|                                                           | £. s. d. |
|-----------------------------------------------------------|----------|
| Hire of examination room .. .. .. .. .. .. ..             | 5 5 0    |
| Fittings (the timber being lent by Mr. Moore, builder) .. | 7 11 0   |
| Blue serge, to cover desks, 120 yds. at 12½d. £6 7 6      |          |
| Resold at 8d. .. .. .. .. .. ..                           | 4 0 0    |
|                                                           | <hr/>    |
| Sundry articles of stationery, total, about .. .. .. ..   | 2 7 6    |
| Printing of examination papers .. .. .. .. ..             | 7 0 0    |
| Printing and posting Prize-List .. .. .. .. ..            | 15 0 0   |
| Sundry payments, including Doorkeeper .. .. .. ..         | 3 0 0    |
|                                                           | <hr/>    |
|                                                           | 2 0 0    |
|                                                           | <hr/>    |
|                                                           | £42 3 6  |

In making calculations for Local Examinations in connexion with the University, the expense of printing examination papers may be deducted. On the other hand, provision must be made for the travelling expenses and lodging of the Examiners sent down, for local advertisements, notices, &c., and for any local prize-fund. See above, p. 18.

# EXAMINATION PAPERS

EXETER, JUNE, 1857.

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## NOTICE.

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THE Examination Papers used at Exeter in June last were published, partly for the satisfaction of those who were locally interested, partly as a basis on which to collect information for future examinations. It would probably strike most persons at first sight that the questions cover too much ground. To obviate this objection, it was only necessary to refer to the circumstances of the examination.

One hundred and twenty candidates entered their names, and a hundred and seven actually assembled at Exeter. They came from schools of various kinds—from grammar-schools and commercial schools ; and two little fellows, from a National school, walked twenty miles in order to be present. Some of the candidates had left school for some time, and had been carrying on their own studies. The employments for which the youths were destined were connected with the various branches of agriculture, commerce, and the arts, and the courses of education they had pursued were widely different. It was necessary to provide for all these varieties, and at the same time to detain the candidates for the shortest possible period at the place of assembly.

The scheme was not publicly proposed until last Christmas ; and the first step taken was to address a letter to the master of every commercial school in Devonshire, and to some of the masters in the adjacent counties,\* requesting information as to the course of education pursued, and the books used in their respective schools. The opinions of some intelligent parents in the middle ranks, as to the kind of knowledge required in business, were also ascertained.

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\* Recourse was had to a printed list for Devonshire ; no similar list for Cornwall and Somerset could be found.

Notices, drawn up with a view to satisfy the reasonable expectations of both these classes of persons, were issued in February. The Board of Examiners was not constituted till March, and on the 14th of that month the final notice was issued. The examiners, therefore, were not responsible for the general outline of the examination, but only for the mode of carrying it into effect.

The subjects of examination were arranged under four heads or departments, designated respectively—

- A. Religious Knowledge.
- B. Language and History.
- C. Arithmetic and Mathematics.
- D. Practical Science and Art.

A preliminary examination in reading, writing, and arithmetic, was to be passed by all candidates without exception; an examination on religious knowledge by all whose parents did not object, and one hundred candidates were in fact examined in this subject. All candidates for prizes in Department D were required to pass creditably either in Department B, or in Department C. It was found impossible to devote less than one entire day to each department.

The general arrangement was to devote three hours in the forenoon to an elementary or general paper, and to allow four hours in the afternoon for more advanced or more detailed knowledge. To meet the case of the junior candidates, a second elementary paper was prepared for the afternoon (in A and B), for which two hours were allotted; leaving two hours for one of the more advanced subjects. In C this arrangement was unnecessary, on account of the mixed character of the questions in the two papers of Pure and Mixed Mathematics. On the fourth day the candidates in Department D were much fewer than on the three former days. The morning examination was rather general than elementary. In the afternoon the candidates were allowed to choose one of three papers, prepared with a special reference to Agriculture, Commerce, and the Arts.

The subjects of Drawing and Music were also assigned to the fourth day, being, for the most part, selected by those candidates who declined the higher or special examination on that day; some candidates were examined in drawing on previous afternoons on which they were disengaged.

It may be remarked generally, that a much larger number of questions was set than any one candidate was expected to answer, and that questions suited to the younger and older candidates were included in the same paper. This arrangement was adopted in order to give to every candidate the widest range of selection, and the least occasion for subsequent complaint. Considering the various circumstances of the youths, no other plan presented so little prospect of inconvenience, and no inconvenience did in fact result from the course adopted.

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#### LIST OF THE EXAMINATION COMMITTEE.

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- SIR JOHN KENNAWAY, Bart., Chairman of Justices Bridge Committee, *President.*
- SIR S. H. NORTHCOTE, Bart., Chairman of Quarter Sessions.
- W. BUCKINGHAM, Esq., Mayor of Exeter.
- S. SILLIFANT, Esq. J. P., Chairman of Justices Prison Committee.
- J. BELFIELD, Esq., J. P., Chief Steward of Implements, Bath and West of England Agricultural Society.
- W. MILES, Esq., J. P., Committee of Training College.
- JOSEPH WERE, Esq., Committee of Training College.
- REV. CHANCELLOR HARINGTON, Honorary Theological Lecturer, Diocesan Training College.
- REV. W. DAVID, Principal of the Training College.
- R. DYMOND, Esq., Surveyor, Committee of Exeter Literary Society.
- MR. PASMORE, Wholesale Woollendraper,                    }  
MR. HUSSEY, Yeoman and Auctioneer,                    } *Treasurers.*
- T. D. ACLAND, JUN., *Secretary.*
- REV. H. MITCHELL, Curate of Silverton, *Assistant Examination Secretary.*
- MR. W. H. ROBERTS, Bookseller, *Assistant Secretary.*
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I have taken the liberty, which I hope will be excused, of supporting the assertion in the text (p. 17), by showing the active part which the members of the Committee take in other business, and in Education.

## LIST OF THE EXAMINERS.

- REV. F. TEMPLE**, late Fellow of Balliol College, Oxford, H. M. Inspector of Church of England Training Schools.
- J. BOWSTEAD**, Esq., late Fellow of Pembroke College, Cambridge, H. M. Inspector of British and Protestant Dissenting Schools.
- REV. CHANCELLOR HARINGTON**, Hon. Secretary of Diocesan Board of Education.
- SIR STAFFORD HENRY NORTHCOTE**, Bart.
- REV. MORGAN COWIE**, formerly Principal of the College of Engineers, Putney.
- REV. ROBERT WALKER**, Reader in Experimental Philosophy, Oxford.
- REV. J. S. HENSLOW**, Professor of Botany, Cambridge.
- HENRY WENTWORTH ACLAND**, Esq., M.D., Dr. Lee's Reader in Anatomy and Physiology, Oxford.
- MAX MÜLLER**, Esq., M.A., Professor of Modern European Languages in Oxford.
- DR. AUGUSTUS VOELCKER**, Professor of Chemistry, Royal Agricultural College, Cirencester.
- C. R. COCKERELL**, Esq., R.A.
- G. RICHMOND**, Esq.
- JOHN HULLAH**, Esq., Professor of Vocal Music at King's College, London.

# EXAMINATION PAPERS.

JUNE, 1857.

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## PRELIMINARY EXAMINATION.

### I. Passage chosen to be written from dictation :—

A conjurer and a tailor once happened to converse together. “Alas!” cries the tailor, “what an unhappy poor creature am I! if people take it into their heads to live without clothes, I am undone; I have no other trade to have recourse to.” “Indeed, friend, I pity you sincerely,” replies the conjurer; “but, thank Heaven! things are not quite so bad with me; if one trick should fail, I have a hundred tricks more for them yet.” A famine overspread the land: the tailor made a shift to live, but the conjurer was obliged to beg from the tailor, whose calling he had despised.

### II. Questions in Arithmetic dictated :—

- (1). Subtract 37 from 10021.
- (2). Subtract  $9\frac{1}{2}d.$  from  $1000l.\ 0s.\ 0\frac{1}{4}d.$
- (3). Multiply  $36l.\ 1s.\ 7\frac{1}{2}d.$  by 128.
- (4). Divide  $25l.\ 0s.\ 6d.$  by 143.

### III. A passage from the Spectator was selected for an exercise in reading. The candidates were called out one by one, in order, and, after reading the passage, were asked a few questions in the grammar of it.

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## DEPARTMENT A.

### ELEMENTARY PAPER I.—(TUESDAY MORNING.)

1. What was the sin committed by Adam and Eve? what their punishment? and what the first promise of redemption?
2. Name the chief persons of the posterity of Seth mentioned in the Scriptures.
3. What special permission, what special command, and what special promise were given to Noah and his descendants?
4. Whence did Abraham come when called by God, whither did he go, and where did he finally settle?

5. Trace the pedigree of Joseph from Abraham. What was the cause of his being in Egypt, and what the cause of his advancement there?
- 
6. With what event does St. Mark open his Gospel, and what prophecies does he declare to have been thereby fulfilled?
7. The Scribes and Pharisees found fault with our Lord for mixing with Publicans and sinners. How did He answer them?
8. On what occasions did our Lord restore dead persons to life, and with what differences in each case?
9. Who were the Sadducees, Pharisees, and Herodians?
10. Relate and explain any one of our Lord's Parables as recorded by St. Mark.
- 
11. What is meant by "Common Prayer," and from what other kinds of Prayer is it distinguished? Are any blessings promised in Holy Scripture to the common prayer of Christians?
12. What does the Exhortation at the beginning of the Morning Service state to be the purposes for which we assemble?
13. Explain the following phrases:—  
 “Rend your hearts, and not your garments.”  
 “O Lord, correct me, but with judgment.”  
 “The Scripture moveth us in sundry places.”  
 “Lighten our darkness, we beseech thee, O Lord.”
- State in what part of the Services each occurs.
14. On what occasions and by whom were the Hymns Benedictus (Blessed be the Lord) and Nunc Dimittis (Lord, now lettest thou thy servant) respectively spoken?
15. Write out the fifth and eighth Commandments, and after each write out the parts of the Duty towards my Neighbour taken from it.
- 
16. Draw a map of Palestine showing the Sea-coast, the Jordan, the Sea of Galilee, the Dead Sea, and the towns of Sidon, Hebron, Bethel, Jericho, and Jerusalem.
17. Draw a map of Palestine, and mark where the following nations dwelt: the Philistines, Rephaims, Horites, and Amorites.
18. Describe in words, or draw a map to show, the situation of Nazareth, Capernaum, Decapolis, Bethsaida, and Cæsarea Philippi.
-

**A.**

## ELEMENTARY PAPER II.—(TUESDAY AFTERNOON.)

1. What was the sin of the world before the Flood? Is there any allusion to it in the command given to Noah immediately after the Flood?
2. How came men to speak different languages after the Flood?
3. In what respects was Isaac a type of Christ?
4. What did Jacob before his death prophesy concerning Levi and Judah, and how was each prophecy fulfilled?
5. Why and when was Jacob called Israel? Did any other of the Patriarchs receive a new name? Mention any places in Palestine named from events which occurred at them.
  
6. Relate as nearly as you can in the words of St. Mark the miracle of the Raising of Jairus's daughter. State what occurred on the way to Jairus's house.
7. Write out the account of the Transfiguration of our Lord. Which of the Apostles were present at it? Is it ever alluded to afterwards in the Bible?
8. On what occasion did our Lord successively put all his adversaries to silence, and in what manner?
9. On what occasions and for what reasons did the Pharisees find fault with our Lord or his disciples?
10. What instances are recorded of the disciples disputing among themselves, and what did our Lord say concerning these disputes?

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11. What is the meaning of the word Litany? Into how many parts may our Litany be divided? On what days and at what time is it ordered to be used, and what Prayer is substituted for it at other times?
12. Explain the following sentences, and state where each occurs:
  - “ O Lord, deal not with us after our sins.”
  - “ Neither reward us after our iniquities.”
  - “ There is no health in us.”
  - “ As in the provocation, and as in the day of temptation in the wilderness.”
  - “ In knowledge of whom standeth our eternal life.”
13. Who was St. Chrysostom? Write out the prayer which is called by his name. What are the two petitions in which it sums up all our desires?

14. What is the explanation given in the Catechism of the words—“Give us this day our daily bread”? What is meant by “ghostly dangers,” and what by our “ghostly enemy”?
  15. Explain what is meant by “the works of the devil,” “the pomps and vanities of this wicked world,” and “the sinful lusts of the flesh.”
  16. Give from the Catechism a brief account of the privileges of Christians.
  17. What are the Creeds of the Church of England? What are the three great truths taught in the Apostles’ Creed, and how may they be proved from Scripture?
  
  18. Give the situation of the following places and the meanings of their names: Jehovah-jireh, Beersheba, Galeed, Mahanaim, Peniel.
  19. Draw a map to show the political divisions of Palestine and the nations by which it was bounded in our Lord’s time.
  20. Draw a plan of Jerusalem, showing the Mount of Olives, the Temple, and the Brook Kedron.
- 

## A.

### HIGHER PAPER.—(TUESDAY AFTERNOON.)

This paper is divided into four sections. You may not answer questions in more than two sections.

#### SECTION I.

1. Who was appointed to lead the people of Israel into the Promised Land? and why were not Moses and Aaron permitted to bring them in?
2. What three nations did the Israelites defeat just before crossing the Jordan, and at what places were the decisive battles fought?
3. What was the first city which the Israelites took in Canaan, and in what way did they take it?
4. Who governed the people of Israel after Joshua’s death, and how long did that form of government continue?
5. Narrate what is told us of Gideon. Compare his character with that of Jephtha.

6. Who was the first king of Israel? What was the date of his accession, and what were the circumstances in which he was chosen?
7. Which of the kings of Judah were eminent for piety? Give a short account of any one of them.
8. Give an account of the principal Fasts appointed under the Jewish dispensation.
9. Name the chief Types of the Messiah.
10. Give the chief prophecies relating to our Lord.
11. Give instances from the Old Testament of manly energetic characters. Point out their readiness to acknowledge God, especially in their temporal concerns.

### SECTION II.

1. Who is the author of the Acts of the Apostles? Give reasons for your answer.
2. "Ye shall be witnesses unto me both in Jerusalem and in all Judaea and in Samaria and unto the uttermost part of the earth." Show that the history recorded in the Acts of the Apostles is an exact fulfilment of these words.
3. Relate the miracle of the Day of Pentecost. With what similar miracle in the Old Testament may it be contrasted?
4. Give some account of the planting of the Christian faith at one of the following places: Antioch in Syria, Lystra, Philippi, Corinth, Ephesus.
5. Give a chronological list of St. Paul's Epistles, with the time and place at which each was written.
6. Where are the following places, and what events are connected with each of them: Thessalonica, Paphos, Troas, Miletus, Puteoli, Cenchrea?
7. Give some account of two of the following persons: Barnabas, Timothy, Cornelius, Apollos, Aquila, Gallio, Stephen, Felix.
8. Explain the words in italics in the following phrases:—
  - "When Gallio was *deputy* of Achaia."
  - "There arose no small stir about *that way*."
  - "Brought up in *this city* at the *feet* of *Gamaliel*."
  - "We took up our *curriages*."
  - "I appeal unto *Cesar*."
9. Arrange the Books of the New Testament in the order in which they were probably written.

### SECTION III.

1. Name the principal Fathers of the first three centuries, and give an account of the life and writings of any one of them in each century.

2. What was the difference between the Eastern and Western Churches in regard to the celebration of Easter? Name the eminent persons engaged in the controversy.
3. What became of the Christians during the invasion of Judæa by the Romans?
4. How many persecutions of the Church do Christian historians enumerate, and which were the most severe?
5. What testimony is borne by Pliny and other Heathen writers to the morality and piety of the early Christians?
6. Who was the first Christian Emperor, and of what country was he a native?
7. What evidence is there of the existence of an early British Church?
8. Into how many classes were Christians divided in the primitive Church, and how were they arranged during the hours of public worship?
9. What was the purpose and what the result of the Council of Nicaea?

#### SECTION IV.

1. Mention any circumstances in the 15th century which prepared the way for the Reformation in the 16th.
  2. Give an account of the early and academical life of Archbishop Cranmer.
  3. Which was the first English Translation of the Bible? What translations appeared in England during the first half of the 16th century?
  4. When was the Book of Common Prayer first drawn up? What revisions has it undergone?
  5. When was the Church Catechism drawn up? and by whom? With what service was it connected?
  6. Give a brief history of the composition of the 39 Articles.
  7. What were the grounds of the Marian persecution, and under what circumstances were severities practised in the reign of Elizabeth?
  8. Name the most eminent Divines who flourished during the last half of the 16th century.
-

## DEPARTMENT B.

## ELEMENTARY PAPER I.—(WEDNESDAY MORNING.)

1. Analyse the following passage, and fully parse the words printed in italics :—

“ I saw when at *his* word the formless *mass*,  
 The world’s material *mould*, *came* to a heap;  
 Confusion heard his voice; and wild uproar  
 Stood *ruler*; stood vast infinitude *confined*.”

2. Give other instances of the affix *less*. What affixes and what prefixes are used in English to express increase or diminution?
3. In what different ways do English nouns form the plural? Give three instances of each.
4. Define a pronoun. For what does the pronoun “ it ” stand in the sentence, “ It is necessary to be careful ”?
5. Give instances of words which are sometimes one part of speech and sometimes another, and point out how you determine, in a given case, under what part of speech any such word falls.
6. Parse fully the words in italics in the following sentences :—

“ Go *down* that lane.”  
 “ Put *down* that book.”  
 “ I am quite *well*.”  
 “ It is not *worth* sixpence.”  
 “ The stars *above* are silent.”  
 “ He prevented me *from* doing it.”

7. Give a list of the sovereigns of England, with the dates of their accession, from the Conquest to the present time.
8. By what title was the Crown held by Henry IV., Henry VII., James I., and George I.?
9. What was the nature of the dispute between Becket and Henry II., and how did it terminate?
10. What was the cause of the war with France in the reign of Edward III., and what were the leading incidents of that war?
11. What were the chief events in the reign of Charles II.?
12. In whose reign respectively did each of these men live: Wolfe, Nelson, Marlborough, Blake, Harry Hotspur, Sir Thomas More, Wieliff, Simon de Montfort, Laud, Sir Walter Raleigh, Milton, Lord Clive?

13. Draw a map either of Devonshire, or of Cornwall, or of Somerset.
  14. With what countries and in what articles do the following seaports chiefly trade : Hull, Southampton, Plymouth, Bristol, Liverpool, Glasgow ?
  15. What are the chief manufactures of Birmingham, Leeds, Manchester, and Sheffield ?
  16. Describe the situation and chief products of Canada, or the Cape of Good Hope.
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## GEOGRAPHY.

### SUPPLEMENTARY TO THE ELEMENTARY PAPER I.

1. Draw a map of Spain and Portugal, inserting the mountains and rivers, and the towns of Madrid, Seville, Cadiz, Barcelona, Lisbon, and Oporto.
  2. Describe the course of the Danube ; mention the cities on its banks, and state the facilities it affords for trade.
  3. Mention any remarkable instances in which the geographical situation of any country has much affected its history.
  4. Give some account of the trade of Russia, and mention the parts of the world to which we should have recourse for supplying the same articles of commerce if we could not get them from thence.
  5. Which is the best frontier for a country—a chain of mountains, a desert, or a large river ? Give instances of each, to illustrate your answer.
  6. Enumerate the principal rivers in North America, and draw a map of the basin of any one of them.
  7. What large towns and the mouths of what rivers would you pass in a coasting voyage from Demerara to Peru ?
  8. Give the political divisions of British India.
  9. Describe the size, shape, and situation of the islands of New Zealand.
  10. What countries would lie to the right and left of a voyager going by sea from Bombay to Suez ?
-

## B.

## ELEMENTARY PAPER II.—(WEDNESDAY AFTERNOON.)

Two hours allowed for this paper.

1. Analyse the following passage, and parse fully the words in italics :—

“ *Ere* sin could blight, or sorrow *fade*,  
 Death came *with* friendly care ;  
 The opening *bud* to Heaven *conveyed*,  
 And bade it blossom there.”

2. Give a list of English words derived from the Latin *facio*, or its compounds.

3. Define a Preposition. How do you distinguish, in parsing, between the uses of the word “ with ” in the two sentences—

“ I saw a man with a sword.”  
 “ I killed a man with a sword.”

4. Give a list of English prefixes, distinguishing the Latin from the Saxon.

5. Compose short sentences to show the difference in meaning and use between *invention* and *discovery*, between *pretend* and *dissemble*, between *skill* and *dexterity*, between *wisdom* and *knowledge*.
- 

6. Mention any manufactures that have been introduced into this country by foreigners, and state the circumstances.

7. What were the chief provisions of Magna Charta ? How was it obtained ?

8. What were the chief battles in the Wars of the Roses ? What was the effect of those wars upon England ?

9. About what time were the following inventions respectively made : Paper, Gunpowder, Printing, Window-glass, the Steam-engine ?

10. Give an account of the reign of Elizabeth.
- 

11. Give a list of the Market Towns in any one of the three Western Counties.

12. Draw a map to show the course of any river in the three Western Counties, and mark on it all the towns that you can remember to be on its banks.

13. What are the chief manufactures of Tiverton, Frome, and Yeovil ? Whence do they get their raw materials ?

14. In a coasting voyage from Exeter to Bristol, what capes and what seaports would you pass ?

## B.

## ENGLISH LITERATURE.—(WEDNESDAY AFTERNOON.)

Two hours allowed for this Paper.

This Paper is divided into five Sections. You may answer questions in the first Section, and in one, but not more than one, of the other four.

## SECTION I.

1. From what languages has the English been derived? And what sort of words, speaking generally, come from each source?
2. Give instances of English words derived from Latin, Greek, Saxon, French, British, and German.
3. Give the etymology of "heavy," "stupid," "wise," "resemblance," "detail," "critical," "knowledge," "event," "translation."
4. Give a list of our greatest poets, in chronological order.
5. What are the most marked differences between English and Latin in the conjugation of verbs, and in the government of nouns?
6. In the sentence, "Give me that book," what reasons are there for calling the word *that* an adjective, and what for calling it a pronoun?
7. What parts of speech are the words in italics in the following sentences?—

"*Living* wisely is the best preparation for *dying* calmly."  
"*Living* or *dying* we are the Lord's."

Express the same meaning in other parts of speech.

## SECTION II.

## SHAKESPEARE'S 'JULIUS CÆSAR.'

1. Paraphrase the following:—

" But 't is a common proof  
That lowliness is young ambition's ladder,  
Whereto the climber-upward turns his face :  
But when he once attains the upmost round,  
He then unto the ladder turns his back,  
Looks in the clouds, scorning the base degrees  
By which he did ascend. So Caesar may.  
Then, lest he may, prevent. And since the quarrel  
Will bear no colour for the thing he is,  
Fashion it thus ; that what he is, augmented,

Would run to these and these extremities :  
 And therefore think him as a serpent's egg,  
 Which hatch'd would, as his kind, grow mischievous :  
 And kill him in the shell."

2. Point out the words of Latin origin.
3. Parse the words that, scorning, prevent, augmented, hatched, as, kind, mischievous.
4. Explain "a common proof," "base degrees," "will bear no colour."
5. Explain the allusions in the following :—
  - (a) " My ancestors did from the streets of Rome  
     The Tarquin drive when he was called a king."
  - (b) " Be thou my witness, that against my will,  
     As Pompey was, am I compelled to set  
     Upon one battle all our liberties."
  - (c) " Even by the rule of that philosophy  
     By which I did blame Cato for the death  
     Which he did give himself."
6. Describe the course of the third Act, in which Cæsar is killed.
7. What were the different motives which induced Brutus and Cassius to kill Cæsar ? Give reasons for your answer.
8. What part does Antony bear in the play ?
9. What other plays did Shakespeare write on subjects taken from Roman history ?
10. What writers of dramatic poetry immediately preceded Shakespeare, or were contemporary with him ?

### SECTION III.

#### MILTON'S 'PARADISE LOST.'

1. Paraphrase and analyse the following :—
 

" Thus Satan talking to his nearest mate,  
   With head uplift above the wave, and eycs  
   That sparkling blazed ; his other parts besides  
   Prone on the flood extended long and large  
   Lay floating many a rood ; in bulk as huge  
   As whom the fables name of monstrous size  
   Titanian or earth-born that warr'd on Jove."
2. Parse the words Satan, eyes, blazed, prone, extended, long, rood, as (huge), whom, Titanian.
3. Explain the allusions in the last two lines.
4. Explain the following :—
 

" Whose orb  
   Through optic glass the Tuscan artist views  
   At evening from the top of Fesolè."

5. Explain the following :—

“ When with fierce winds Orion arm'd  
Hath vex'd the Red Sea coast, whose waves o'erthrew  
Busiris and the Memphian chivalry.”

6. Paraphrase the following :—

“ For never since created man  
Met such embodied force as named with these  
Could merit more than that small infantry  
Warr'd on by cranes.”

7. Translate into Latin “ since created man.”

8. Give the etymology of the words extended, fable, monstrous,  
optic, chivalry, infantry, course, pursues, custody.

9. Explain the allusions in the following :—

“ As when a gryphon through the wilderness  
With winged course o'er hill or mossy dale  
Pursues the Arimaspians, who by stealth  
Had from his wakeful custody purloin'd  
The guarded gold.”

10. Write out briefly the argument of the Second Book.

11. Give a list of Milton's other writings.

12. What was Milton's age when he wrote the ‘Paradise Lost’? What  
other poets were then flourishing?

#### SECTION IV.

##### GOLDSMITH.

1. Paraphrase the following :—

“ But me not destined such delights to share,  
My prime of life in wandering spent and care ;  
Impelled with steps unceasing to pursue  
Some fleeting good that mocks me with the view,  
That, like the circle bounding earth and skies,  
Allures from far, yet, as I follow, flies ;  
My fortune leads to traverse realms alone,  
And find no spot of all the world my own.”

2. Parse the words me, delights, prime, impelled, like, allures, far,  
alone, find.

3. Point out the words of Latin origin.

4. Analyse

“ But where to find that happiest spot below  
Who can direct when all pretend to know ? ”

5. What is the leading idea of ‘The Traveller,’ and what is that of  
‘The Deserted Village’? How far have the anticipations  
expressed in the latter been confirmed by facts?

6. Explain the allusions in the following :—

- (a) "Or onward where the rude Carinthian boor  
Against the houseless stranger shuts the door."
- (b) "With food as well the peasant is supplied  
On Idra's cliffs as Arno's shelvy side."
- (c) "Where lawns extend that scorn Arcadian pride,  
And brighter streams than famed Hydaspes glide."
- (d) "Where wild Altama murmurs to their woe."
- (e) "On Torno's cliff's or Pambamarca's side."

7.—

"At her command the palace learnt to rise ;  
Again the long-fallen column sought the skies ;  
The canvas glowed beyond e'en nature warm ;  
The pregnant quarry teemed with human form."

Name the chief architects, painters, and sculptors of modern Italy.

8. Give the etymology of spent, impelled, pursue, realm, pretend, stranger, nature, human.
9. Write out as nearly as you can recollect Goldsmith's description of the Village Preacher.
10. What men of note were among Goldsmith's acquaintances and friends ?
11. What are Goldsmith's most important prose works ?

## SECTION V.

### COWPER'S 'TASK.'

1. Paraphrase the following :—

"He that attends to his interior self,  
That has a heart and keeps it, has a mind  
That hungers and supplies it, and who seeks  
A social, not a dissipated life,  
Has business ; feels himself engaged to achieve  
No unimportant though a silent task.  
A life all turbulence and noise may seem  
To him that leads it wise and to be praised ;  
But wisdom is a pearl with most success  
Sought in still water and beneath clear skies.  
He that is ever occupied in storms,  
Or dives not for it, or brings up instead,  
Vainly industrious, a disgraceful prize."

2. Parse the words supplies, social, has, engaged, though, turbulence, wise, sought, instead, industrious.
3. Analyse the last sentence.
4. Write out the argument of 'The Sofa.'
5. Translate into Latin

"By ceaseless action all that is subsists."

6. Explain the allusions in the following, and state who the persons are whose names are mentioned :—

- (a) “ Even the favoured isles  
So lately found, although the constant sun  
Cheer all their seasons with a grateful smile,  
Can boast but little virtue.”
- (b) “ There touched by Reynolds a dull blank becomes  
A lucid mirror, in which Nature sees  
All her reflected features. Bacon there  
Gives more than female beauty to a stone,  
And Chatham’s eloquence to marble lips.”
- (c) “ Is it a time to wrangle when the props  
And pillars of our planet seem to fail,  
And Nature with a dim and sickly eye  
To wait the close of all ?”
- (d) “ They have fallen  
Each in his field of glory : one in arms,  
And one in council. Wolfe upon the lap  
Of smiling victory that moment won,  
And Chatham heartsick of his country’s shame.”
- (e) “ And when I place thee in it, sighing say,  
I knew at least one hare that had a friend.”

7. What was the date at which Cowper wrote ‘ The Task,’ and how old was he at the time? What is his own account of the manner in which he was induced to write it?
8. Write out, as nearly as you can, Cowper’s description of the arrival of the Postman.
9. What comparison would you draw from Cowper’s writings between the state of England at that time and now?
10. What other poets were contemporary with Cowper? Had he any acquaintance with them?

## B,

### LATIN.—(WEDNESDAY AFTERNOON.)

Two hours allowed for this paper.

This Paper is divided into four Sections. You may answer questions in the first Section, and in one, but not more than one, of the other three.

#### SECTION I.

1. Give the Latin for the nouns “ head,” “ voice,” “ nest,” “ thing.” Decline one of them.
2. Give the rules for the comparison of adjectives, and an example of each rule.

3. Decline *iste, quisque, and ego.*
4. Quote the rule for the agreement of the Relative with the Antecedent. How is the case of the Relative determined ?
5. Translate into Latin—
  - “ I saw him do it.”
  - “ I heard him say so.”
  - “ I am going home.”
  - “ It is the duty of all men both to work and to learn.”
6. Write the following sentence in Latin in as many ways as you can :—
  - “ Cæsar sent ambassadors to sue for peace.”
7. What were the successive forms of government at Rome, and at what date did each begin and end ?
8. How many wars did Rome wage with Carthage ? Who were the most famous Generals engaged on each side ?
9. What men composed the first Triumvirate, and what the second ? What finally became of each of them ?
10. What was a Patrician, a Censor, a Consul, a Dictator, a Tribune of the People ?

## SECTION II.

### VIRGIL.

1. Translate

“ Semina vidi equidem multos medicare serentes  
   Et nitro prius et nigrâ perfundere amureâ,  
   Grandior ut fœtus siliquis fallacibus esset ;  
   Et quamvis igni exiguo properata maderent,  
   Vidi lecta diu et multo spectata labore  
   Degenerare tamen, ni vis humana quotannis  
   Maxima quæque manu legeret ; sic omnia fatis  
   In pejus ruere ac retro sublapsa referri.”

2. Parse *semina, perfundere, siliquis, lecta, manu, sublapsa.*
3. Translate and explain

“ Apparet liquido sublimis in aere Nisus,  
   Et pro purpureo pœnas dat Scylla capillo.”

4. Translate

“ Vix ea fatus erat, cùm circumfusa repente  
   Scindit se nubes, et in æthera purgat apertum.  
   Restitit Æneas clarâque in luce refusit  
   Os humerosque Deo similis ; namque ipsa decoram  
   Cæsariem nato genitrix lumenque juventæ  
   Purpureum et laetos oculis afflārat honores.”

5. Give the rules for the government of humeros, Deo, Cæsariem, juventæ, oculis.

## 6. Translate and explain—

“ Ipsa Paphum sublimis abit, sedesque revisit  
 Læta suas; ubi templum illi centumque Sabæo  
 Thure calent aræ sertisque recentibus halant.”

## 7. Scan these three lines.

## SECTION III.

## CÆSAR.

## 1. Translate

“ Dum haec in colloquio geruntur Cæsari nuntiatum est equites Ariovisti proprius tumulum accidere, et ad nosstros adequitare; lâpides tlaque in nosstros conjicere. Caesar loquendi finem fecit, seque ad suos recepit suisque imperavit, ne quod omnino telum in hostes rejicerent; nam etsi sine ullo periculo legionis delecta cum equitatu prælium fore videbat, tamen committendum non putabat ut pulsis hostibus dici posset eos à se per fidem in colloquio circumventos. Posteaquam in vulgus elatum est quâ arrogantiâ in colloquio Ariovistus usus omni Galliâ Romanos interdixisset, impetumque iu nostros ejus equites fecissent, caue res colloquium diremisset, multo major alacritas, studiumque pugnandi majus exercitu injectum est.”

2. Parse geruntur, equites, loquendi, suis, rejicerent, pulsis, circumventos, usus, diremisset, exercitui.
3. What English words are derived from gero, accido, lapis, finis, hostis, rejicio, periculum, fides, impetus, injicio?
4. How many soldiers were there in a Roman legion in Cæsar's time, what were the titles of the officers, and how was the common soldier armed?

## 5. Translate

“ Quo prælio bellum Venetorum totiusque oræ maritimæ confectum est. Nam quum omnis juventus omnes etiam gravioris ætatis in quibus aliquid consilii aut dignitatis fuit eo convenerant; tum navium quod ubique fuerat unum in locum coegerant; quibus amissis reliqui neque quo se reciperent neque quemadmodum oppida defenserent, habebant.”

6. Give the rules for the government of prælio, totius, consilii, navium, quibus.
7. Conjugate confectum est, coegerant, defenserent.

## SECTION IV.

## HORACE.

(By request of a Candidate.)

## 1. Translate

“ Illi robur et æs triplex  
 Circa pectus erat, qui fragilem truci  
 Commisit pelago ratem  
 Primus, nec timuit præcipitem Africum  
 Decertantem Aquilonibus,  
 Nec tristes Hyadas, nec rabiem Noti,  
 Quo non arbiter Hadriæ  
 Major, tollere seu ponere vult freta.”

2. Parse illi, æs, pelago, rabiem, quo, tollere.

3. Translate and explain

“ Omnes eodem cogimur ; omnium  
Versatur urnâ serius ocius  
Sors exitura et nos in aternum  
Exilium impositura cymbæ.”

4. Name the metre and scan the lines.

5. Translate

“ Vester, Camænæ, vester in arduos  
Tollor Sabinos ; seu mihi frigidum  
Præneste, seu Tibur supinum,  
Seu liquidae placuere Baiae :  
Vestræ amicum fontibus et choris  
Non me Philippis versa acies retro,  
Devota non extinxit arbor,  
Nec Siculâ Palinurus undâ.”

6. Explain the allusions in the words Philippis, devota, arbor, Siculâ Palinurus undâ.

7. Parse (accidence and syntax) the words tollor, mihi, placuere, amicum, choris, Philippis, extinxit, undâ.

## B.

### FRENCH.—(WEDNESDAY AFTERNOON.)

Two hours allowed for this paper.

1. Translate into English as literally as possible—

Or, Sire, les ressources de la France sont grandes ; elles sont immenses ; des faits récents ont montré toute leur étendue. Il ne pourrait y avoir danger sérieux que si on venait à se persuader qu'elles sont illimitées et qu'elles sont suffisantes pour faire en un jour en France, et même à l'étranger ce qui doit être l'œuvre patiente du temps. Mais que les prudentes recommandations de Votre Majesté soient entendues, qu'on donne au trop-plein le temps nécessaire pour qu'il soit écoulé, le classement sera rapide et le niveau ne tardera pas à monter ; car encore une fois, la base est solide, les valeurs actuelles reposent en général sur des entreprises sérieuses, productives, et au fond le crédit a conservé tout son ressort. Les embarras, je ne saurais trop le répéter, Sire, ne pourraient venir que de l'exagération dont la spéculation, il faut l'espérer, saura se garantir.

2.—

Lorsqu'on rencontre la jeune reine de ce grand empire, traversant une foule respectueuse sans bassesse et bienveillante sans idolâtrie ; lorsqu'en la voyant monter les degrés du Parlement, entre la statue de Falkland et celle de Hampden, on réfléchit que depuis le jour où cette jeune femme a ceint la couronne de Richard Cœur-de-Lion et de Guillaume de Nassau,

son gouvernement a osé pour le peuple plus que n'oseraient peut-être aucune démocratie, et la vieille Angleterre doublé sa prospérité en devançant les nouveautés qu'arracheraient ailleurs des révolutions, on s'étonne et l'on demande : Qu'a-t-il donc fait, ce peuple, pour tant de bonheur ?

**3. Translate into French—**

Nature has given us two ears and one mouth, in order that we should hear much and say little.

Regard as a true friend the sincere man who apprises you of your faults ; not him who approves of all you say and all you do.

When I see the birds forming their nests with so much art, I ask what master has taught them mathematics and architecture.

**4. Give the gender and meaning of the following words :—**

- |             |               |
|-------------|---------------|
| 1. demeure. | 6. peur.      |
| 2. tissu.   | 7. avis.      |
| 3. bête.    | 8. auberge.   |
| 4. abrégé.  | 9. achat.     |
| 5. état.    | 10. mensonge. |

**5. Give the passive participle of the verbs—**

- |               |             |
|---------------|-------------|
| 1. recevoir.  | 4. mettre.  |
| 2. tenir.     | 5. couvrir. |
| 3. connaître. | 6. boire.   |

**6. Translate the following letter into French and put a proper beginning and close to it.**

We had beautiful weather for the agricultural show at Newton.

The number and variety of animals gave me a good opportunity of executing your commission. I bought a Devon bull and a lot of Leicester sheep for you, which I hope will please you. I shall despatch them by the steamer from Southampton next week.

The great attraction to visitors was the Steam Plough, which succeeded admirably, performing seven acres a-day with ease.

## DEPARTMENT C.

## ELEMENTARY PAPER.—(THURSDAY MORNING.)

1. Add nine thousand and four to twenty-three thousand seven hundred and five, and subtract the answer from 40,000.
2. If an orchard contain 78 apple-trees, and each tree produce on an average eleven hundred and six apples, what is the whole number of apples in the orchard?
3. A dealer buys 157 head of cattle for 2014*l.*; how much a head do they cost him?
4. Find the cost of 2247 articles, at 1*l.* 16*s.* 4*½d.* a piece.
5. A farm consists of 23 fields, of which 7 measure, on the average, 13 a. 3 r. 17 p. apiece; 8 others measure 9 a. 0 r. 35 p. each; and the rest 6 a. 1 r. 8 p. each: what is the acreage of the farm?
6. Reckoning each furrow as 9 inches in breadth, how far will a ploughman walk in ploughing an acre of land?
7. Calculate the cost of wintering a bullock in a straw-yard for 24 weeks, allowing him 2*½* lb. of oil-cake daily, and accepting the manure made as an equivalent for the straw consumed, the cake being assumed to cost 11*l.* per ton.
8. A bankrupt's debts are 4976*l.*, and he is able to pay 11*s.* 8*¾d.* in the pound: what are his effects worth?
9. A gentleman has a poor meadow that produces him annually about  $\frac{1}{4}$  ton of hay per acre, and he is advised to convert it into a water-meadow, at a cost of 12*l.* 10*s.* per acre: what must be the produce of hay per acre, *after* the improvement, in order that it may pay the owner ten per cent. upon his outlay; supposing the hay to be worth 3*l.* per ton on an average of years?
10. If I give 3*¾l.* for a load of hay weighing 17*1\frac{3}{5}* cwt., what should I pay for a whole rick weighing 27*½* tons?
11. If 7 horses carry 80 tons of manure a distance of 1*½* mile in 3 days of 10 hours each, how many days of 7 hours each will be occupied in carting a heap of 29 tons to a distance of 725 yards with 4 horses?
12. Calculate the rates on a rental of 263*l.* 10*s.* at 2*s.* 3*d.* in the pound, the rateable value being two-thirds of the actual value.
13. In a farm of 38*½* acres,  $\frac{5}{9}$ ths are arable,  $\frac{17}{45}$ ths meadow, and the rest garden and orcharding: how many acres are there of each sort?

14. If railway shares be bought at 91*l.* 5*s.* per share, how must they be sold in order to gain exactly 4 per cent. by the transaction?
15. If the diameter of a penny-piece be 1.35 in., how many penny-pieces laid together will cover a distance of 100 yards?
16. In a parish of 725 people, .24 are children, .36 are men or boys, and the rest women or girls: how many are there of each class?
17. If the toll at a gate for one horse be 3*d.* and the toll be altered to 12 mils (1000 mils to the £), what will be the loss per cent. on the revenue derived from the horse-toll?
- 

18. Add together  $4a - 3b - 2c$ ,  $6b - \overline{3a - 7c}$ , and  $5a - \overline{4b + 5c}$ ; and subtract the result from  $a + b + c$ .
19. Multiply  $5x^2 - 6xy + y^2$  by  $5y^2 + 6xy + x^2$ .
20. Divide  $a^4 - 2a^2b^2 + b^4$  by  $a + b$ .
21. What is meant by a co-efficient? Find the co-efficient of  $x^3$  in the product of  $x^4 - ax^3 + bx^2 - cx + d$  by  $x^2 - ax + b$ .
22. Divide  $x^3 - \frac{5}{4} \cdot x^2 + \frac{11}{8}x - \frac{1}{2}$  by  $x - \frac{1}{2}$ , and find the value of the quotient when  $x = \frac{1}{2}$ .
23. When is one quantity said to be a measure of another? Show how to find the greatest common measure of 2 algebraical quantities, and extend the rule to 3 or more quantities.  
*Ex.* Find the greatest common measure of  $x^2 - 2x - 3$ ,  $x^2 - 7x + 12$ , and  $x^2 - x - 6$ .
24. Add together the fractions  
 $\frac{1}{a^3(a+x)}$ ,  $\frac{1}{a^3(a-x)}$ , and  $\frac{2}{a^2(a^2+x^2)}$ .

25. Cube  $4a^2 b^{\frac{2m}{3}} c^{4n-2}$ , and extract the square root of the result.

26. Extract the square root of

$$x^4 - 6.x^3 + 10.x^2 - 3.x + \frac{1}{4}.$$

27. Solve the equations

$$(a). \quad x - 6 + 4(x - 3) = 7(x - 4).$$

$$(b). \quad \frac{a}{b.x} - \frac{b}{a.x} = \frac{a^3 - b^3}{a^2 \cdot b^2}.$$

$$(c). \quad \frac{x+2}{7} - 2x = \frac{x-y}{4} - 8.$$

$$3x + 4 - 2y = \frac{2y - 3x}{3}.$$

28. At present A is just 3 times as old as his son B, but 16 years hence he will be only twice as old: what are the ages of A and B?
29. A labourer, having done a piece of work for a certain sum of money, finds that if he had done it in 2 days less he would have earned 6d. a day more; and if he had taken 3 days more to do it, his daily earnings would have been 6d. less: in what time did he do it, and what were his earnings?
- 

30. Show how to describe an equilateral triangle upon a given finite straight line.  
What figure would be formed by placing two equilateral triangles base to base?
31. Prove that any two *sides* of a triangle are together greater than the third side.  
Is the same proposition true of the *angles* of a triangle? Give reasons for your answer.
32. Prove *geometrically* that, if a straight line be divided into any two parts, the squares of the whole line and of one of the parts are equal to twice the rectangle contained by the whole, and that part, together with the square of the other part.
33. Prove the last proposition *algebraically* also.
34. If a straight line touch a circle, the straight line drawn from the centre to the point of contact shall be perpendicular to the line touching the circle.
35. What is meant by the angle *in* a segment of a circle?  
Prove that the angle in a semicircle is always a right angle.
36. Apply the last proposition to construct an oblong, of which the diagonal and one of the sides are given.
37. Give the practical method of testing whether an angle is a right angle or not.
-

## C.

## PURE MATHEMATICS.—(THURSDAY AFTERNOON.)

1. Extract the cube root of 1157·625.
2. Show that the product of any 3 consecutive numbers is divisible by 6.
3. What is a *prime* number? Show how to determine whether any given number is a prime number or not.
4. What year of the Christian era would this be, if six were the radix of our scale of notation instead of ten? On what scale would the present year be represented by  $83v$  where  $v$  represents twelve?
5. Find the side of a square containing, in superficial measure, 763 feet 18 inches and 30 seconds.
6. Find the vulgar fraction equivalent to the circulating decimal  $0\cdot725656\dot{5}$ .
7. What is meant by *incommensurable* magnitudes? Explain the term with reference (1) to the side of a square and its diagonal, (2) with reference to the circumference and diameter of a circle.
8. Define *ratio* and *proportion*, and show that whenever 4 numbers are in proportion the product of the two extreme terms is equal to the product of the two mean terms. What use is made of this property in practical arithmetic?
9. Find the square root of  $94 - 42\sqrt{5}$ .
10. Enunciate the binomial theorem, and prove that the  $n^{\text{th}}$  term in the expansion of  $(1-x)^{-\frac{1}{2}}$  : the  $n^{\text{th}}$  term of  $(1-x)^{-\frac{3}{2}} :: 1 : 2n-1$ .
11. Solve the equations
  - (a).  $8x(a-x) = a(3a-2x)$ .
  - (β).  $x^2-6 = xy$ .
  - (γ).  $y^2-11 = 50-x^2$ .
  - (γ).  $\sqrt{a+x} + \sqrt{a-x} = \frac{12a}{5\sqrt{a+x}}$ .
12. Find two numbers such that they shall bear to each other the ratio of 3 to 4, and their sum shall bear to the sum of their squares the ratio of ·14 to 1.
13. Define a logarithm, and prove that the sum of the logarithms of two numbers is the logarithm of their product.
14. Having given  $\log. 2 = 0\cdot30103$ , find the logarithms of  $\frac{5}{4}$ , and of 25·6.

15. What numbers consisting of 2 digits have the property of being equal to 4 times the sum of those digits?
- 

16. About a given circle describe a triangle equiangular to a given triangle.

17. Inscribe an equilateral and equiangular hexagon in a given circle.

18. Show, by a geometrical construction, how to find a mean proportional between two given straight lines.

What is the *algebraical* expression for the mean proportional between two given quantities?

19. Prove that similar triangles are to one another in the duplicate ratio of their homologous sides.

20. Show that, if an equilateral triangle be inscribed in a circle, the square of its side is equal to 3 times the square of the radius.

21. Show how to draw a line representing  $\sqrt{5}$ , when a line is given which represents a unit.

22. If a tangent C D at any point of a circle be terminated by A C, B D, tangents at the extremities of a diameter A B, and O be the centre of the circle, show that C O D is a right angle.
- 

23. Define the terms *sine* and *cosine* of an angle.

Express the cosine of the sum of two angles in terms of the sines and cosines of the angles themselves.

24. Prove the equation—

$$\text{Tan. } (45^\circ + A) - \text{Tan. } (45^\circ - A) = 2 \text{ Tan. } 2A.$$

25. Express the sine of any angle of a triangle in terms of the sides.

26. Having given two sides of a triangle and the included angle, show how to determine the other elements of the triangle in a form suited for logarithmic calculation.

27. Having given the equation  $\text{Sin. } (\theta - a) = \text{cos. } (\theta + a)$ , determine the angle  $\theta$ .

28. Find  $\sin. \theta$  from the equation,  $m \sin. 2\theta = n. \cos. 2\theta + m$ .

29. If the sides  $b$  and  $c$  of a triangle A B C be bisected by lines drawn from the angles B and C, these lines will meet in a point whose distance from the angle A =  $\frac{1}{3} \sqrt{a^2 + 4bc \cos. A}$ .

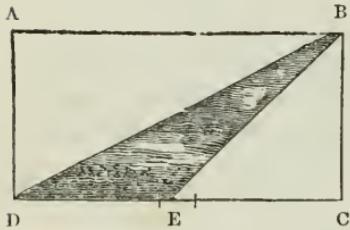
30. Show how by pegs and ropes to lay down a line equal to the distance between an accessible object (A), and an inaccessible object (B).
-

## C.

## APPLIED MATHEMATICS.—(THURSDAY AFTERNOON.)

1. Calculate the simple interest on 210*l.* 11*s.* 4*d.* for 90 days, at 3 per cent. per annum.
  2. A debt of 300*l.* is left unpaid for 7 years: what will be the amount due at the end of that time, allowing compound interest at 5 per cent. per annum?
  3. Having borrowed 300*l.*, I agree to pay it back in quarterly instalments of 25*l.*, and to pay 2*d.* per £. per month for the use of the money unpaid. How much shall I have to pay back altogether?
  4. I wish to purchase an annuity of 30*l.* for a person whose age, according to the Tables, warrants an expectation that he may live for 15 years. Taking the rate of money at 4 per cent., what ought I to pay for it?
  5. Find the logarithms of .003457 and of 34.57672, and the number corresponding to the logarithm 2.1342794.
- 

6. Find the area of a triangle, the three sides of which are 56, 52, and 60 yards.



7. A B C D is a ten-acre field in the form of a parallelogram, E is a gate in the middle of one side, the triangle B D E is wet and requires draining: what is the extent of B D E, and what would be the cost of draining it at 3*l.* 15*s.* per acre?

8. If a field be thrown up into ridges, as in the figure, and if B C be 1 foot when A C is 4 feet; show that the surface is increased so that



a field of 40 acres has now a surface of more than 41 acres?

9. The longest line that can be drawn from north to south in Devonshire is about 70 miles, and the longest from east to west about 73 miles: if the county were a parallelogram with these lines for its diagonals, what would its area be?
10. If the two sides of a triangular field be 30 and 40 poles, what must the third side be that the field may measure an acre?

11. The end-wall of a house is 28 feet 10 inches wide, and 55 feet 8 inches high to the roof; the gable rises 42 courses of bricks, 4 courses to 1 foot; up to 20 feet from the bottom the wall is  $2\frac{1}{2}$  bricks thick, for the next 20 feet it is 2 bricks thick, thence to the roof it is  $1\frac{1}{2}$  brick thick, and the gable is 1 brick thick: calculate the cost at 5*l.* 16*s.* per rod of brick-work.
  12. What is the rule for measuring round or unsquared timber? When the tree is tapering, what must be done? If the length be 24 feet, the girth at the thicker end 14 feet, and that at the smaller end 7 feet; what is the solid content?
  13. If a cubic foot of metal weigh 3 cwt. 2 qrs., and be worth 15 guineas a ton, what will be the cost of a mile of piping made out of it, with an 8-inch bore and a thickness of  $\frac{3}{8}$ ths of an inch?
  14. I buy a grindstone 30 inches in diameter; but after it is worn down 2 inches, I come upon a flint which makes it useless: what proportion of the cost ought I to receive back from the seller?
- 
15. Why do large wheels run more smoothly than small ones? Illustrate your answer by a diagram.
  16. How do nails hold? Under what mechanical power would you arrange them? What are the advantages of a screw nail over a common nail?
  17. How could you detect a false balance? And how could you ascertain the *real* weight with a false balance?
  18. If a man wants to raise 21 cwt. by means of his own weight (which is 14 stone) and a block pulley like Smeaton's or White's, how many distinct portions of rope must there be between the blocks?
  19. If I wanted to ascertain the quantity (in cubic inches) of material in a small porcelain figure, what would be the readiest way of doing it?
  20. On mixing 63 pints of sulphuric acid (sp. gr. 1.82) with 24 pints of water, one pint disappears: what is the specific gravity of the compound?
  21. I see the flash of a gun from a ship at sea, 8 seconds before I hear the report: how far is the ship from me?
  22. A boat's crew, which can row 8 miles an hour in still water, sets out to cross a river, and arrives in 3 quarters of an hour 2 miles below the landing-place: what is the rate of the current and the breadth of the river?
-

23. Explain what is meant by *meridional difference of latitude* as distinguished from *true difference of latitude*.
24. Prove the following proportions :—
- $$\text{distance} : \text{true difference of latitude} :: \text{radius}$$
- $$:: \cosine \text{ of course,}$$
- $$\text{meridional difference of latitude} : \text{difference of longitude}$$
- $$:: \text{radius} : \text{tangent of course.}$$
25. A ship from Brest (lat.  $48^{\circ} 23'$  N., and long.  $4^{\circ} 30'$  W.) sailed S.W.  $\frac{3}{4}$  W. 238 miles. What were the latitude and longitude arrived at?
26. Describe the *log*, and the method of finding the distance sailed by means of it; and give a rough account of keeping the *dead reckoning*.
- 
27. Show how roughly to strike a meridian line for setting up a horizontal sun-dial.
28. A person, being landed on a desert island without any instruments whatever, finds out that he is in the southern hemisphere. How does he arrive at this conclusion?
29. Explain why the sun does not rise daily in the same point of the horizon.
30. Why is Venus sometimes an evening star, and sometimes a morning star?
31. When clouds are moving rapidly in a bright moonlight, how would you prove to any one that the motion is that of the clouds, and not of the moon?
32. Explain parallax. How has it been shown that falling stars are at no great distance from the earth's surface?
- 
33. What is the standard measure of time? What is the difference between *mean time* and *railway time* at Exeter, its longitude being  $3^{\circ} 33'$  W.?
34. How do navigators find the latitude at sea?
35. What is the best method of finding the longitude? Describe it. In what way were eclipses of Jupiter's satellites useful in determining longitudes?
36. Describe the projections most in use for maps, and the advantages of each.
37. When a map has no mountains or hills drawn upon it, how can we tell the general direction of the higher lands and the general slope of the country?

## DEPARTMENT D.

## GENERAL PAPER.\*—(FRIDAY MORNING.)

This Paper is divided into Five Sections. You are recommended not to answer questions out of more than three.

## SECTION I.

1. On what causes does climate depend? What other countries on the world's surface have nearly the same climate as England?
2. What is the cause of wind? What are the prevailing winds in England? What winds would you be sure to meet with, and what might you possibly meet with, in a voyage from London round the Cape of Good Hope to Calcutta?
3. What is meant by zones of vegetation? How many such zones are there, and how is each characterised?
4. What great currents are there in the waters of the world? Point out any obvious uses of these currents.
5. What causes determine the quantity of rain in any district? State how much rain falls on the west, and how much on the east coast of England, and explain the reason of the difference.

## SECTION II.

1. Explain the term inertia of matter.
2. What is capillary attraction? Give some familiar examples.
3. Define specific gravity. Find the specific gravity of the solution on the Examiner's table. (N.B. The Examiner will supply you with a specific gravity bottle and a pair of scales, and will tell you what is the weight of the bottle when empty and what when full of distilled water at 60°.)
4. How is the pressure of the air on a given surface most readily determined?
5. What different combinations can you make of three pulleys, and what will be the advantages of each?
6. Describe the balance, the steelyard, and the weighing machine.
7. Explain the construction of a common thermometer.

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\* The object of this part of the examination is to call attention to facts of general application in the material world, as a foundation for special experience. It will include practical construction of simple forms (without mathematical proof), common properties of bodies, and physical geography.—(*Extracted from Notice No. I.*)

8. Why does a blanket keep people warm ?
9. A beam of light falls on a polished surface ; how will it be affected at all angles of incidence ?
10. Give a general explanation of the phenomenon of the rainbow.
11. Mention some of the most common and easy methods of making artificial magnets.
12. Describe the construction of a common electrical machine.

### SECTION III.

1. What is the composition of the atmosphere ?
  2. How can you readily distinguish an organic substance from a mineral ?
  3. What are the essential characters which distinguish a chemical compound from a mere mechanical mixture ?
  4. What compounds do you get by burning the following substances in oxygen : charcoal, sulphur, phosphorus, iron ?
  5. When an animal or vegetable body dies what becomes of it, and how, chemically, is the life of beings made to depend on the death of other beings ?
  6. Give the composition of pure water by weight and volume.
  7. Mention some substances containing nitrogen.
  8. What is the best test for detecting the presence of lime in a solution ?
  - 9.\*What would occur if the following mixtures were made ?
 

Ca. O. C. O<sub>2</sub> + H. Cl.  
 Mn. O<sub>2</sub> + H. Cl.
  - 10.\*What are the general properties of acid and basic substances ?
  - 11.\*The solution (A) may contain potash, soda, and ammonia. Find out whether all or which are present.
  - 12.\*The solution (B) may contain copper and iron. Which of these substances are in it ?
  - 13.\*The solution (C) may contain sulphuric, hydrochloric, and nitric acids. Which does it contain ?
- (N. B. The Examiner will, if you ask him, supply you with the solutions and the requisite tests.)

### SECTION IV.

1. Name the chief organic constituents of plants.
2. What conditions are essential to the germination of seeds ?
3. Compare the nutritive properties of potato and flesh.

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\* Professor Voeleker is not responsible for these questions. See his Letter to the Secretary in 'The Education of the Farmer and of the Middle Classes in General.' By T. D. Aeland, Esq. Ridgway.

4. Describe the smut-ball in wheat. How may it be readily propagated, and how successfully resisted?
5. In what respect does the root of a woody dicotyledon differ from the stem?
6. What are the parts commonly called "Creeping Roots" in such plants as coltsfoot, couch-grass, field thistle? Why would such weeds not be destroyed by hoeing them down?
7. Describe the leaves, inflorescence, and flowers of the three plants numbered 1, 2, 3.  
(N.B. The Examiner will supply you with the plants.)
8. What are the principal characteristics by which reptiles are distinguished from other vertebrate animals?
9. Draw a diagram of the stomach of a sheep, and explain the peculiarities of the digestive organs in ruminants.
10. Describe the chief elements of the circulation in man, and state the course of the blood through them. Illustrate by diagrams.
11. How could you distinguish, if a man were severely wounded, whether or not an artery had been injured? And what should be done if one had?
12. What are the functions of the skin?
13. Sketch the fore-leg of a deer, horse, or sheep, and compare it part for part with the arm and hand of a man.
14. Show how the teeth of a sheep and those of a dog are respectively adapted to their purposes.
15. Describe the structure of the egg of the common fowl, before incubation.
16. What are the important parts of a gland?
17. What elements enter into the composition of fat, sugar, starch, water, white of egg, saliva, bone?

#### SECTION V.

1. Which are commonly called the three primary colours? How are tints and shades produced?
2. What is meant by complementary colours? What colours are complementary to each of the following: blue, purple, olive, russet?
3. In what proportions must yellow and purple combine to neutralise each other?
4. How do colours modify each other when put side by side?
5. What is the use of white or black edgings round ornamental forms on white or black grounds?

6. Show how to divide a parallelogram into similar parallelograms.
  7. Describe a hexagon on a given straight line.
  8. Give a practical method for drawing parallel lines without a parallel ruler.
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The Elementary Examination in department D differs in purpose from the corresponding examination in the other departments : it is not elementary in the sense of taking a lower standard, but only in the sense of being confined to general principles, and not touching on special applications.

The Questions will be such as can be answered after a study of Tate's Elementary Course of Natural and Experimental Philosophy, Wilson's Chemistry, Chambers's Physiology, Redgrave's Manual of Colour, Hughes's Physical Geography.

The chief purpose of the Special Examination in this department will be to ascertain whether those who have mastered the general principles belonging to this department can readily apply them to the use required in Agriculture, Manufactures, Commerce, or the Arts.

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## D.

(SPECIAL.)                  AGRICULTURE.—(FRIDAY AFTERNOON.)

1. Describe one or more of the instruments used in levelling, explaining the principle on which the construction depends.
  2. The base of a triangular field being 12 chains 20 links, one of the sides 8 chains 30 links, and the other 6 chains 70 links, give the size in acres, roods, and perches statute measure.
  3. In what way would you measure a round rick of corn of greater diameter at the eaves than at the base?
  4. What is the least fall that may safely be employed for an open surface-drain? Will the same be enough for an under-drain?
  5. What is meant by a water-table?
  6. Why will the same soil need draining, and yet be the better for irrigation?
  7. In what cases will a sandy soil require draining?
- 
8. Why are the front wheels of a waggon made lower than the hind?
  9. Enumerate the parts of a cart-harness, and explain the use and mechanical action of each part.

10. If four horses are employed to draw a waggon, is it better to place them in one line, or two and two, or four abreast? Give reasons for your answer.
11. Explain the construction of a common pump, and why it cannot be employed to raise water to a height greater than about 30 feet?
12. Describe any shaker which you may have seen employed to remove the straw in a threshing-machine. What determines in which direction the straw shall travel?
13. Describe the different parts of a common plough and the use of each part. What are the points included in good ploughing? How far does each depend on the plough, and how far on the ploughman?
14. When bands of leather are used to transmit motion, what is the best form of wheel for them to pass over, concave or convex? Give reasons for your answer.
15. Describe the slide-valve of a steam-engine and its action.
16. What are the disadvantages of over-filling a steam-boiler?

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17. In what combinations is lime found in nature, and in what forms is it used in agriculture?
  18. What are the properties and composition of ammonia? Mention some refuse manuring matters which owe their fertilising value chiefly to the presence of ammonia. How can the escape of ammonia be prevented from fermenting organic matters?
  19. What is the composition of bones? To what crops is bone-manure best applied, and in what forms?
  20. What is guano, and what are the distinguishing characteristics of genuine Peruvian guano?
  21. What are the chemical constituents of turnips?
  22. Explain the four-course rotation, and give reasons for the order in which the crops follow each other.
  23. What portable manures are best adapted for root-crops, and what for corn and grass? and why?
  24. Which of the following crops are most expensive to cultivate—carrots, mangolds, swedes, and turnips? and why?
  25. Why is autumn clearing of stubbles important, especially on heavy soils?
  26. On what does the nutritive value of the various substances used in feeding stock depend?

27. What are the chief agricultural products of the West of England?
  28. What are the limits of the cultivation of barley, wheat, maize, and rice?
  29. What agricultural products are exported from Australia, Jamaica, and Canada respectively?
  30. What is the great difference between the climate of the East and that of the West of England, and what effect has this difference on the produce of grass and corn?
  31. Is there any difference between the North of Great Britain and the South such as to affect the produce of root-crops?
  32. What breeds of cattle, sheep, or horses are commonly considered indigenous in the West of England?
  33. Mention the principal pure breeds of cattle and sheep, and explain what you mean by a pure breed.
  34. Mention the chief geological features of Somerset, Devon, or Cornwall, so far as they affect agriculture.
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35. Post either by single or double entry the following items of a Memorandum Book.

|                                                       | £. |
|-------------------------------------------------------|----|
| Paid Mr. Williams for 15 quarters seed-wheat .. .. .. | 48 |
| Paid Mr. Brooks for a yearling bull .. .. ..          | 30 |
| Received of Mr. Greening for 30 fat sheep .. .. ..    | 75 |
| Received of Mr. Sharp for a milch cow .. .. ..        | 20 |
| Paid Mr. James for a young horse .. .. ..             | 35 |
| Paid labourers fortnight's wages .. .. .. ..          | 30 |

36. Explain the difference between single and double entry.
  37. Explain the words debtor, creditor, to, by, balance, stock.
  38. What is the use of the Ledger? How is it divided?
  39. What is the difference between the Waste-book and the Journal?
- 

40. Why is a spade an article of value? and why is a silver spoon of more value than a spade?
  41. Why are some labourers paid higher than others?
  42. Mention some instances of the advantages of division of labour.
  43. If wheat falls to half its price, ought bread to fall in the same proportion?
  44. What is the effect upon prices if a new gold-mine is discovered?
-

## PRINCIPLES OF HORTICULTURE.\*

45. Explain how drainage affects the temperature of soil.
  46. What ground temperature is requisite for the growth of ordinary vegetables and fruit trees, and what to ripen fruit?
  47. What is the meaning of evaporation, radiation, and conduction of heat? Show what connection any of them have with the proper management of soil and with the treatment of plants.
  48. Give rules for the watering of plants: explain the reasons of the rules. What other method, besides watering, can you adopt for keeping the soil moist?
  49. How would you proceed practically to make and strike a cutting? Explain the reasons of the process.
  50. Where is the sap of trees formed, in the root or in the leaves? Show how this bears on the formation of wood.
  51. "The functions of *respiration*, *perspiration*, and *digestion*, are the offices of leaves:" explain each of these functions. What is the difference between the digestion of a plant and the digestion of an animal?
  52. What natural agency do plants require besides moisture and warmth?
  53. "The object of pruning is either to influence the production of flowers and fruit, or to augment the quantity of timber." Show how each of these objects is promoted by good pruning, and impeded by bad pruning, in the case of particular trees.
  54. State how you would lay out a small kitchen garden, and when your principal crops should be sown.
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**D.**

(SPECIAL.)      COMMERCE.—(FRIDAY AFTERNOON.)

1. Explain the difference between single and double entry.
  2. Explain the words debtor, creditor, to, by, balance, stock.
  3. What is the use of the Ledger? How is it divided?
  4. What is the difference between the Waste-book and the Journal?
- 
5. What are indigo, madder, and turmeric?
  6. How do you readily distinguish hard from soft water?
  7. What changes take place in the grain when barley is malted?

\* Owing to an oversight, the questions 45–54 were not delivered to the candidates.

8. In brewing at high temperatures a light yeast comes to the top : in brewing at low temperatures a heavy yeast falls to the bottom. What is the reason of the difference ?
  9. Some weak spirit is put into a bladder and hung up. Does it become weaker or stronger ?
  10. Describe the manufacture of vinegar. If vinegar be adulterated with sulphuric acid, how may the adulteration be detected ?
  11. Describe the chemical changes that take place in making cider. What points have to be attended to to make the cider good ?
  12. Explain the nature and use of mordants in dyeing. What is the use of *ageing* a mordanted cloth ?
  13. What is the essential composition of a soap ?
  14. How would you detect the following adulterations : copper in green pickles, Scheele's-green in green-coloured bonbons, gypsum in flour, alum in bread, sawdust coloured with sassafras in ground ginger ?
  15. How would you determine the quantity of real spirit in gin and in port-wine ?
  16. When bread is made by mixing carbonate of soda and muriatic acid with the flour, how do these substances act ? How far is the final result the same as if the bread had been made with yeast ? What precautions may be taken to secure that the muriatic acid used for this purpose shall not contain arsenic ?
- 
17. In the first steam-engines a piston within a cylinder was driven up by the elastic force of steam : how was the downward motion of the piston effected, and what would be the pressure upon it ?
  18. Describe the principal contrivances for converting the reciprocating motion of the piston into other modes of motion.
  19. What is the difference between a *high* and a *low*-pressure engine ?
  20. What is the effect of the *condenser* in a common engine ? and why are not railway engines constructed with condensers ?
  21. What is done with the steam in a railway engine after it has moved the piston ?
  22. Describe the principle and action of the *governor* in a common engine ?
  23. What is the advantage of a *fly-wheel* in a steam-engine, or any other machinery ? Why is a fly not required in a locomotive ?
  24. Describe the common *slide-valve* and its action.  
How is the *slide-valve* commonly worked ?—explain the movement of the contrivance which works it.

26. What is meant by working a steam-engine "*expansively*"?
  27. Describe the safety-valve of a steam-boiler. Is there any danger of its not acting effectually?
  28. What are the disadvantages of over-filling a steam-boiler?

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  29. What nations in Europe are most engaged in exporting their own agricultural products, what nations in exporting their own manufactures, and what nations in the carrying trade?
  30. From what parts of the world are the chief articles in a druggist's shop imported?
  31. Whence do we obtain our chief supplies of the following articles, or the materials for making them: soap, candles, sugar, shoes, cloth, hats, gloves, penknives, lucifer-matches, hair-brushes and silks?
  32. What is the trade of the Levant?
  33. Where are the chief seats of the manufacture of glass in this country, and what has placed the manufacture there?
  34. Norwich was once our chief manufacturing town. What has carried the bulk of our manufactures to the opposite coast?
  35. Where are needles, pins, razors, and muskets manufactured respectively?

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  36. Why is a spade an article of value? and why is a silver spoon of more value than a spade?
  37. Why are some labourers paid higher than others?
  38. Mention some instances of the advantages of division of labour.
  39. If wheat falls to half its price, ought bread to fall in the same proportion?
  40. What is the effect upon prices if a new mine is discovered?
- 

## D.

(SPECIAL.)      THE ARTS.\*—(FRIDAY AFTERNOON.)

1. Enumerate the kinds of timber chiefly used in building, and describe the leading characteristics of each.
2. Which are the most durable kinds of timber:—
  1. When exposed to the action of the weather;
  2. When protected from wet, but in a free circulation of air;
  3. When constantly immersed in water or in wet soil?

\* "This will embrace the useful and decorative arts. It will be understood that what are called the Fine Arts hardly enter into the scope of these examinations, except so far as drawing or music form part of general education."—*Extract from Notice III.*

3. Describe Kyan's process for preserving timber.
  4. What is the composition of concrete, and for what purposes is it best applied?
  5. How are bricks made?
  6. What are the principal differences of character between wrought and cast iron? For what purposes is cast iron best adapted?
  7. Is there any objection to the combination of iron and stone in buildings? Point out the relative merits of tiles and slates for roofing.
  8. Is there any objection to the use of zinc for the purpose?
- 
9. What is the best form to give to a cast-iron girder?
  10. Should a cast-iron column be solid or hollow, and why? Is there any analogy in natural forms (animal, vegetable) to assist in determining the answer?
  11. What is meant by a trussed, and what by a hipped, roof? Illustrate your answer by a diagram.
  12. What are the different methods of bonding in building a brick wall?
  13. Draw diagrams to illustrate half-lapping, tenon and mortice, and dovetailing, and explain the principle of the construction.
  14. Draw a kingpost or a queenpost roof, and explain the mechanical action of each part. What advantage, in point of convenience, has the queenpost roof?
  15. Draw a five-bar gate, and show how the cross-bar ought to be placed, and why.
  16. Explain the action of the parts of an arch. Explain the terms voussoir, intrados or soffit, span, and rise.
  17. What is the difference between single-framed and double-framed floors?
  18. What is the best method of obtaining a sufficient foundation for a large building on a bed of wet sand or on a marsh?
- 
19. What is the standard thickness of brickwork? How do you reduce any other thickness to this in measuring?
  20. How many standard rods of brickwork are there in a wall 60 feet long, 12 feet high, and 3 bricks thick?
  21. What is called true pitch? It is common with builders, if the roof be of true pitch, to increase the breadth by half, in order to find the girt over both sides: how nearly is this correct?

22. Draw the pedestal, column, and entablature of the Doric, Ionic, or Corinthian order, and name all the parts.
23. Draw a Decorated or a Perpendicular window.
24. Mention the styles of Gothic Architecture in chronological succession, with the approximate date of each.
25. Explain the following terms, and illustrate them by drawings, mouldings, cavetto, ogee, cyma recta.
26. Illustrate by drawing the difference between convex and concave mouldings. Which is best suited to carry a heavy weight, and which to carry a light weight?
27. Illustrate by a rough sketch the most striking distinctions between the features of a Greek temple and those of a Gothic church, especially as regards the direction of the principal lines.
28. What are the principal features of Norman Architecture ?

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29. Show by drawings the different styles of ornament suited to wood, stone, iron, gold.
30. What is the real use of flowers or other natural objects in the ornament of flat fabrics, such as carpets? Is the hexagon or the square the best element of composition? Give a reason for your answer.
31. Draw a pattern for a carpet or a paper, using either geometrical forms or any flower.
32. Which is the most retiring, and which the most advancing colour?
33. "Good architecture does not conceal construction, but beautifies it."  
"Construction should vary with the material employed, and the design should be adapted to the material employed."
- Illustrate these principles by examples of good or bad design.
34. Draw a design for a railing or balustrade in wood, iron, and stone.

## D.

## MUSIC.—(FRIDAY AFTERNOON.)

1. How many *major thirds* does every major scale contain?
2. Between what notes of a major scale is the *tritone*, or pluperfect fourth, included?
3. What is the third to (above) *Do* (or C)?—the fourth to *Si* (or B)?—the fifth to *La* (or A)?
4. What interval is formed by *Re*—*Fa*♯ (or D—F♯)?—by *Si*♭—*Re* (or B♭—D)?—by *La*—*Mi*♭ (or A—E♭)?
5. What is a *tetrachord*?
6. Are the two tetrachords into which every kind of scale is divisible always *alike* in construction?
7. What is the principal difference between a *major* and a *minor* scale?
8. Explain the difference between *common* and *triple* time, and give an example of each.
9. Explain what is meant by *compound* time, and give an example of it.
10. Write a *measure*, or *bar*, in each of the kinds of time indicated by the following signatures:— $\frac{3}{4}$ ,  $\frac{6}{8}$ ,  $\frac{2}{4}$ , C.
11. Explain the following musical terms: *Duet*, *Round*, *Da Capo*, *Pause*, *Bass*, *Slur*, *Stave*, *Score*.
12. Write a list of the principal *musical composers* with whose names you are acquainted, in approximate chronological order.
13. Put the following passage into *score*, for Treble, Alto, Tenor, and Bass.

A musical score consisting of two staves. The top staff is for Treble (G-clef) and the bottom staff is for Bass (F-clef). Both staves are in common time (indicated by a 'C'). The music consists of quarter notes and half notes, with a few eighth notes and sixteenth note patterns. Measures 1-4: Treble has a quarter note followed by an eighth note, then a half note, then a quarter note. Bass has a half note followed by a quarter note, then a half note, then a quarter note. Measures 5-6: Treble has a half note followed by a quarter note, then a half note, then a quarter note. Bass has a half note followed by a quarter note, then a half note, then a quarter note. Measures 7-8: Treble has a quarter note followed by an eighth note, then a half note, then a quarter note. Bass has a half note followed by a quarter note, then a half note, then a quarter note.

A musical score consisting of two staves. The top staff is for Treble (G-clef) and the bottom staff is for Bass (F-clef). Both staves are in common time (indicated by a 'C'). The music consists of quarter notes and half notes, with a few eighth notes and sixteenth note patterns. Measures 1-4: Treble has a half note followed by a quarter note, then a half note, then a quarter note. Bass has a half note followed by a quarter note, then a half note, then a quarter note. Measures 5-6: Treble has a quarter note followed by an eighth note, then a half note, then a quarter note. Bass has a half note followed by a quarter note, then a half note, then a quarter note. Measures 7-8: Treble has a half note followed by a quarter note, then a half note, then a quarter note. Bass has a half note followed by a quarter note, then a half note, then a quarter note.

14. Transpose the following passage into the scale or key of La, or A.



15. Add three parts to the following figured Bass.

16. Harmonize the following passage.

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**D.****DRAWING.—(FRIDAY.)***One Hour allowed for each Section.***I. FREE-HAND DRAWING.**

From one of the examples prepared by the Department of Science and Art connected with Her Majesty's Committee of Council on Education.

*Directions for the Student.*—The student is required to copy in pencil the figure on the following page, increasing the scale so that A B is enlarged to C D.\* Precise imitation and clearness of outline are necessary. No instruments or means of measurement of any kind will be allowed.

**II. FROM SOLIDS.**

1. Group a few blocks of wood according to your own taste, and draw them.
2. Draw an egg.

(N.B. The blocks of wood and the egg were given at the time.)

**III. FROM MEMORY.**

Draw from memory one of the following :—A table, a cup and saucer, a door, a gate, a cart, a boat, an anchor, a tree, a flower, a horse, or a dog.

**IV. PRACTICAL GEOMETRY.**

1. Draw a straight line, and then show how to draw another line perpendicular to it at one end.
2. Draw a segment of a circle less than a semicircle, and show how to find its centre.
3. Inscribe an equilateral triangle in a circle.
4. Divide a given line into five equal parts with the scale and parallel rulers.
5. Divide a circle into three equal parts by lines drawn from the centre.
6. Show how to draw parallel lines without parallel rulers.

**V. PERSPECTIVE.**

1. Draw a chess-board in perspective.
2. Draw a flight of steps in perspective.
3. Draw a circle horizontally in perspective.
4. Draw the elevation of a cottage or of a colonnade, and then draw the same in perspective.

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\* Enlarged by about one-third in addition to the original size (C D being to A B as 4 to 3).



## R E P O R T

ON THE

## RESULTS OF THE EXAMINATION AT EXETER.

THE object of the promoters of this Examination was to improve the Education of the Middle Classes by taking the existing schools as a basis, and giving them an opportunity of proving their efficiency, or discovering where amendment was needed. Previous schemes had, generally speaking, laboured under the defect of either ignoring what was already done, or attempting to do too much. Suggestions for the immediate erection of new colleges and schools, or for the immediate creation of a machinery of inspection similar to that now working under the authority of the Committee of Council, are impracticable in proportion to their completeness. Such plans would be impracticable in most countries, but peculiarly so in England, where it is the well-known characteristic of all social and political action never to create but always to develope. The Government, indeed, already possessing a Department familiar with the subject, might have gradually extended their operations, so as to bring the Education of the Middle Classes within their reach. But private individuals or local bodies could have a chance of success only on the condition of accepting the schools as they now are, and adapting every proposed improvement to their immediate needs; and whatever is to be done hereafter in the same direction must submit to the same condition, and either originate with the schools themselves, or jealously respect their interests.

For this reason the rules under which the Examination was conducted, the subjects and the grouping of those subjects, the general character of the questions, were not determined in

accordance with any theory of what the schools ought to teach, but adapted, as far as possible, to what they did teach. The masters were consulted, and their suggestions had much weight in settling all these points ; and though it was thought advisable to step a little beyond this limit in some respects, the deviation was comparatively slight, and the bulk of the work set before the candidates to do was very nearly that for which their schools had professed to prepare them.

The results of the Examination may, therefore, be considered as showing pretty fairly both what the schools are teaching and how they are teaching it. And a careful review of the Papers will serve as a good basis for future more extended operations, and may perhaps render it possible to give the masters some useful hints.

The Candidates were divided, according to previous notice, into two bodies ; those above 15 were called seniors, and those below were called juniors. In the competition for the prizes the seniors and juniors were kept entirely distinct.

The Examination consisted of—

1. A Preliminary Examination in—  
Writing from Dictation,  
The first five Rules of Arithmetic,  
Reading aloud.
2. Four Departments. in each of which Prizes were offered—
  - A. Religious Knowledge.
  - B. Literature and Languages.
  - C. Mathematics.
  - D. Physical Science and its practical applications.

The Examination Papers and the award of the Examiners, together with some other useful particulars, are contained in a pamphlet, entitled ‘Middle-Class Education, No. II.,’ the publication of which by Mr. Acland preceded this Report.

The number of Candidates, whose Papers ultimately passed under review, was 106 : 34 seniors and 72 juniors.

The general character of the work may be estimated by the Prize List. Sixteen obtained prizes of one sort or another among the seniors, and five were mentioned with commendation.

Twenty-two obtained prizes among the juniors, and ten were commended. It should be observed, however, that the standard was purposely put low, because much could not fairly be expected on the first occasion of trial. If the Examination were to be taken as a test how far the boys were, in any tolerable sense, educated according to their rank in life, all those who did not obtain prizes must be considered as having fallen below that mark. This leaves eighteen out of the thirty-four seniors, and fifty out of the seventy-two juniors, who cannot be said to have passed. The force of this statement will seem to be increased by the consideration that the candidates were probably picked specimens of the schools from which they came; but, on the other hand, not a few were going back to school again, and had not obtained all that the schools could give them.

Some light is perhaps thrown on the character of the failures by the fact that out of the eighteen seniors and fifty juniors who did not obtain a prize, nine seniors and twenty-seven juniors must have been rejected for deficiency in the Preliminary Examination, even if their other work had been better than it was. This deficiency was chiefly shown in the spelling, but many also failed in elementary arithmetic, and, among them, some who attempted a good deal in the mathematical papers. I do not think the schools universally recognise the very great importance of a thorough knowledge of the simplest elements of learning as a condition of all progress afterwards. The mistake of pushing on boys too fast is one against which Her Majesty's Inspectors have perpetually to struggle in the National Schools. It now appears to be not uncommon in the schools from which the candidates came to be examined at Exeter. And it will be necessary, in all future schemes for similar Examinations, to lay great stress on this part of the work.

The writing from dictation would, I am sure, be much improved if the masters would make it more an exercise of intelligence, and less one of mechanical memory. The usual practice is to dictate so few words at a time, that the writer need only remember their sound, without troubling himself about the sense; and to repeat these words so often, that the effort even to remember the sound is reduced to nothing. The proper method,

on the contrary, is to dictate a clause at a time, so as to compel an attention to the sense as well as to the words, and not to repeat at all, unless asked to do so before a word is written.

The spelling might also be improved if the masters would take pains in their reading-lessons to point out and account for the many anomalies with which English spelling abounds. The old Spelling Books, if they were faulty in relying so entirely as they did on mere memory, yet generally had the merit of grouping anomalies together, and thus directing the attention to them. Something of the same sort is still needed, if the learning columns of spelling by heart is given up.

Failures in elementary arithmetic, when they occur, are generally due to the master's not having exactly appreciated what is a difficult and what an easy problem to a beginner. The first difficulty which boys meet with here is in learning subtraction. They will readily seize on the principle of the process, but cannot always grasp it so firmly as to make no failure in applying it. The business of the master is to practise them in exercises which will compel them to retain the principle before their minds. But it is not uncommon to find that, as the boys advance, the exercises given to them, instead of becoming harder in principle, are merely made more troublesome in practice. To subtract 3 from 1001 is a much more difficult exercise for a beginner than to subtract 1278134678 from 3526518931. Yet many masters will attempt to increase the difficulty of the exercises by merely increasing the number of figures. Similar remarks, of course, apply to the other elementary rules.

The following Table exhibits the results of the Preliminary Examination :—

|              | Seniors. |            |             | Juniors. |            |             |
|--------------|----------|------------|-------------|----------|------------|-------------|
|              | Reading. | Dictation. | Arithmetic. | Reading. | Dictation. | Arithmetic. |
| Fair .. ..   | 22       | 24         | 30          | 43       | 51         | 53          |
| Deficient .. | 11       | 10         | 4           | 26       | 21         | 19          |

The examination in religious knowledge showed a tolerably fair acquaintance with the Bible; but there was little of that

collateral information which might very easily be given, and which very much contributes to the lively and intelligent study of such a book. In particular the candidates were not well instructed in Scriptural geography.

It is difficult to judge how far the restriction of the elementary paper, in Department A, to the book of Genesis and the Gospel of St. Mark, deprived some candidates of the opportunity of showing all their attainments under this head. My impression, however, after reading the papers, is, that the restriction was too narrow at any rate for permanent use. The proper way of reading the Bible in schools is not to get up one or two books for examination, but to read it daily for many years. And if a part is fixed on for more careful study, it should not be so small a part as to put a candidate who has worked it up in the last year on a level with one who had known it from childhood. From the senior candidates a knowledge of one Gospel and of the Acts in the New Testament, and of the historical books down to the death of Solomon in the Old Testament, might, I think, be properly expected. But the questions ought not to be too minute or critical, but rather directed to ascertain whether the candidates had been reading with intelligent attention, or merely going over the familiar ground with minds half asleep.

The answers to questions on the Prayer Book were often very good, but it was obvious that the subject had not, except in a very few instances, formed a part of regular school studies until the notice of the examination had distinctly specified that questions would be set in it. So much intelligence, however, was shown in this part of the work as to make it plain that the school-masters can easily make the subject a part of their routine. I do not think the restriction of the examination to those parts of the Prayer Book ordinarily used in Church had any ill effect. The whole book is more than the candidates can fairly be expected to master. But those who are to use our services ought certainly to know what they are saying when they use them.

The answers to the questions on early Church History were good, but very few candidates attempted them at all. The History of the Reformation was only tried by two, and not successfully by them. I am extremely sceptical of the expediency

of giving any encouragement to these studies in schools for the Middle Classes. It is plain that very few at present attempt to touch them, nor is it likely that many will profitably do so hereafter; I say *profitably*, for I have no doubt that, if continued in the list of subjects for examination, a superficial instruction both in early Church History, and in the History of the Reformation, will be introduced into many schools, but more than a superficial instruction I do not think that many of the schoolmasters could give, and I am confident that few parents would allow their children to receive. The examination in religious knowledge must of course be voluntary, and the result of laying any stress on such branches of it as do not commend themselves to the common judgment, will be to swell the number of those who will decline that examination altogether.

The result of the Examination in Department A is shown in the following Table:—

|                   | Seniors. |           |         | Juniors. |           |         |
|-------------------|----------|-----------|---------|----------|-----------|---------|
|                   | Elem. I. | Elem. II. | Higher. | Elem. I. | Elem. II. | Higher. |
| Fair . . . . .    | 17       | 11        | 6       | 36       | 14        | 5       |
| Deficient . . . . | 13       | 11        | ..      | 32       | 44        | 4       |

The subjects included in Department B (that of Literature and Language) were Grammar, History, Geography, English Literature, Latin, and French. The only good work here was the Latin.

The English grammar (properly so called) was generally very poor. Very few of the boys showed any knowledge whatever of its *principles*, or were able to give any reason for their answers. When they had correctly parsed a word as a noun or pronoun, or the like, they were quite unable to say why they should so parse it. What word grammatically followed a preposition they could point out; what word grammatically preceded it they could not. They could tell that a word was a pronoun, but could not tell, except in the simplest instances, for what noun it stood. They would call a word a conjunction, but could not say what sentences it joined. In short, it seemed as if they had been taught parsing

by the perpetual practice of exercises, without ever being cross-questioned, and without ever receiving any explanation. And though there were a few to whom all this does not apply, they were so few as hardly to affect the general estimate.

Though the work in English grammar was very poor, the analysis of sentences, which belongs to the same head, was (where done at all) generally done well; and even when mistakes were made, the very mistakes often showed considerable intelligence. I have no doubt, in fact, that the deficiency in the English grammar is partly due to the mistaken method adopted in our text-books. In Latin, which is a highly inflected language, it is right to begin with the accidence and proceed to the syntax. In English, which is but slightly inflected, the right course is to begin with the syntax and come back to the accidence. The method of analysis follows this course, and those who have watched the two systems will never doubt which is the correct one.

If grammar is in future to form a part of a compulsory preliminary examination, analysis, and not parsing, should be made the test. Besides the superiority in method of beginning to teach grammar in this way, it is now proved by trial that the schools can do the one and cannot do the other.

The knowledge of history was on the whole as much as could fairly have been expected. Such a knowledge as enables a candidate to enter into the political, or, still more, the social life of a period, belongs in reality to a later age than 16. I think perhaps a little improvement might be made if the masters would take more pains when teaching history to supply proper illustrations. In particular, history should never be read by a class without a map open before them, and everything which can throw light upon laws, customs, or manners, should be diligently hunted up and made available. At present rather more trouble appears to me to have been taken to give an accurate knowledge of dates than to make the narratives lifelike, or the succession of events intelligible.

The geography falls below my expectations, and below what may fairly be required. The work was, for the most part, meagre and not intelligent; giving the impression that the knowledge had been learnt from books and not from maps. Very few

maps were drawn, and few indeed out of those were neat or correct. The answers were generally such as might have been learnt by rote. The physical features of a country were rarely well known, and yet very little intelligent knowledge is possible here, unless physical geography be made the basis.

The knowledge of this subject would be very much improved if the practice of drawing maps neatly and correctly from memory were more common, and if physical geography and its connections with commerce and politics were more carefully taught.

Of the three higher subjects, the English Literature was evidently new, and, if this be considered, it was not badly done. It would certainly be a most valuable addition to the present routine in these schools if the boys were to read a play of Shakespeare or a few books of Milton with the same care and thoroughness which in the public schools is bestowed upon Homer or Sophocles. And I think the experiment of giving masters the option of giving such instruction sufficiently successful to warrant perseverance. But certainly the work done so far can only be considered a beginning, and it is not yet possible to judge whether these schools can go any further than this beginning.

The Latin is by far the best work in this department. Here the masters have all the advantages of a clear aim and an established system. Of course considerable improvement is possible, but it is rather to be sought in the better use of existing materials than in the introduction of anything new. I think Ellis, already largely used, might be used still more largely with advantage. The knowledge of Roman History and Ancient Geography was, with few exceptions, poor: I do not think it would be wise to expect much, but there was hardly even enough to illustrate the books which the boys had been reading. The language, and not the subject matter, is rightly made the chief object of study, but the latter ought not to be entirely excluded.

The French was not good; not so good as, considering the growing importance of it for all practical purposes, it ought to have been. This is a point in which the schools need immediate extension of their system, and not a mere improvement of what already exists. A great number of the schools appear not

to teach it at all, and very few indeed teach it well. There can, however, be no doubt that it is as easy to teach French as to teach Latin.

The results of the examination in Department B are given in the following table:—

|                    | Seniors. |           |           |        |         | Juniors. |           |           |        |         |
|--------------------|----------|-----------|-----------|--------|---------|----------|-----------|-----------|--------|---------|
|                    | Elem. I. | Elem. II. | Eng. Lit. | Latin. | French. | Elem. I. | Elem. II. | Eng. Lit. | Latin. | French. |
| Fair .. .. ..      | 8        | 6         | 4         | 9      | 3       | 10       | 12        | 2         | 13     | ..      |
| Deficient .. .. .. | 23       | 12        | 9         | 4      | 6       | 55       | 32        | 9         | 12     | 5       |

The mathematical work appeared to me to be, taken altogether, more satisfactory than any of the rest, more thoroughly taught, and more entirely assimilated.

The defect here (where the work was defective) was not generally a want of knowledge of the subject, but a want of power of readily applying it. Masters too often seem to fancy that the important and difficult part of a problem is the calculation; but long after a boy has mastered this part of his work, and calculation even of the more difficult kind has become mechanical, the greater difficulty still remains to know when to calculate and what. A boy who has thoroughly mastered Vulgar Fractions will still be puzzled by an easy problem which only requires Vulgar Fractions for its solution. His difficulty is not to divide or subtract, or to reduce to a common denominator, but to know which of all these he is to do, and in what order and with what purpose. The business of the master is to practise him in the art not merely of calculating, but of finding out what and how and when he is to calculate. Many of the masters see this, but not yet all of them.

For this reason it is of importance that pains should be taken to give the mathematical questions the form of easy problems as much as possible. A mechanical knowledge of mathematics is of all attainments the most unprofitable. The study, if exclusively pursued, is, under any circumstances, narrow, unleavened as it is by human sympathies and interests, but it compensates for its narrowness by the excellence of the discipline which it

gives. If that discipline become mechanical, and therefore valueless, there is nothing left worth having.

It is right to repeat here what was said above in regard to the arithmetic in the Preliminary Examination, that some of the boys seem to have been pushed on too fast. Nothing can make up for this mistake. At every point the learner should be so cross-questioned as to bring out clearly whether he knows so far what he is doing. He should be able to give the reason for every step in a proposition of Euclid, or in the solution of an algebraical equation, or in the working of a sum in arithmetic. No progress can be sound where this is neglected.

The bulk of the work was, quite rightly, in the elementary part of the subject. The degree in which the candidates entered on the higher branches of it may be judged from the following table :—

|         |       | Number who attempted |               |            |                         |             |            |
|---------|-------|----------------------|---------------|------------|-------------------------|-------------|------------|
|         |       | Mensuration.         | Trigonometry. | Mechanics. | Mathematical Geography. | Navigation. | Astronomy. |
| Seniors | .. .. | 11                   | 7             | 7          | 6                       | 1           | 4          |
| Juniors | .. .. | 6                    | 3             | 3          | 1                       | ..          | 4          |

The general result of the whole examination in these subjects (Department C) is as below :—

|           |          | Seniors.    |         | Juniors.    |         |
|-----------|----------|-------------|---------|-------------|---------|
|           |          | Elementary. | Higher. | Elementary. | Higher. |
| Fair      | .. .. .. | 13          | 5       | 14          | 3       |
| Deficient | .. .. .. | 16          | 16      | 57          | 14      |

The subjects in Department D were rather added to satisfy the demands of the public than to fit the present routine of the schools. The result might have been anticipated. The work is of little value in forming a judgment of what the schools can do in this direction, since it is quite evident that whatever was done was rather due to some accident or to some peculiar taste in the candidate than to the teaching of the schoolmaster.

- That such subjects might be successfully used to give as much cultivation as can be given by mathematics, I am firmly convinced. That the study of them is loudly demanded, no one can deny. But the introduction of them must be gradual, and nothing more can be done at present than to open the way.

The only result obtainable from this part of the work is the expediency of abolishing the distinction made at Exeter between the Special and General Papers. The General Paper was intended to test the knowledge of general principles; the Special Papers, three in number, to test the power of applying those principles to the needs of agriculture, commerce, and the arts respectively. But the tendency of teaching such special applications, separated from the general principles to which they belong merely by the uses to which they are to be put, is always to degenerate into an attempt to make school a substitute for apprenticeship, which it can never be. In as far as special applications cannot rightly come into a General Paper, they would more properly be learnt in actual practice. If, indeed, the schools had already begun systematically to teach with a view to special occupations, it might be advisable to accept their systems. But the examination has proved this not to be the case, and there is no necessity, therefore, for contravening an important educational principle.

One other point I may, perhaps, mention, which I consider established by the experience of the Exeter Examination, and that is the possibility of giving the examination in Physical Science such a practical form as is indicated in questions 3, Section II.; 11, 12, 13, Section III.; 7, Section IV., General Paper D.\* Of the necessity of not merely setting such questions,

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\* These questions stood as follows:—

- Section II.— 3. Define specific gravity. Find the specific gravity of the solution on the Examiner's table.
- Section III.— 11. The solution (A) may contain potash, soda, and ammonia. Find out whether all or which are present.
- “ 12. The solution (B) may contain copper and iron. Which of these substances are in it?
- “ 13. The solution (C) may contain sulphuric, hydrochloric, and nitric acids. Which does it contain?
- Section IV.— 7. Describe the leaves, inflorescence, and flowers of the three plants numbered 1, 2, 3.

but of making them preponderate in any examination on this subject, I entertain a very strong conviction. In future, however, candidates might be required to bring their own chemical tests.

The work done in Department D is shown in the following table:—

|                      | Physical Geography. | Natural Philosophy. | Chemistry. | Physiology. | Principles of Art. | Agriculture. | Commerce. |
|----------------------|---------------------|---------------------|------------|-------------|--------------------|--------------|-----------|
| Seniors { Fair .. .. | 4                   | 1                   | 1          | ..          | 1                  | 1            | 2         |
| Deficient ..         | 4                   | 7                   | 2          | ..          | 3                  | 2            | 1         |
| Juniors { Fair .. .. | 4                   | 1                   | 1          | ..          | 2                  | 1            | 1         |
| Deficient ..         | 10                  | 9                   | 3          | ..          | 6                  | 2            | 5         |

The remainder of the examination consisted of some exercises in Drawing and a paper in Music. The drawing was not very good, but yet quite good enough to deserve encouragement. The music was but poor. The work done in drawing and music is shown in the following table:—

|                 | Drawing. |          | Music.   |          |  |
|-----------------|----------|----------|----------|----------|--|
|                 | Seniors. | Juniors. | Seniors. | Juniors. |  |
| Fair .. .. ..   | 3        | 4        | ..       | 1        |  |
| Deficient .. .. | 5        | 19       | 1        | 5        |  |

I must not conclude these remarks without noticing two very encouraging features in this first experiment. In whatever respects the masters have not yet succeeded in doing as much for their pupils as they would desire, they certainly had succeeded in inspiring them with the spirit of hard work. Nothing could exceed the heartiness or the perseverance with which the candidates went through their papers. They seemed, at any rate, to have learnt the most important thing to learn—a willingness to do their best. And many, I have no doubt, will be carried successfully through life by that, even if they may find little use for what else they got at school. I mention this the

more gladly, because masters often lose all credit for this by far the most essential part of their duty, and are judged only by producible results.

The other point worth noticing was the evident willingness on the part of the masters to improve their own work and their own methods by all the means in their power.

These facts are, I think, a fair ground for feeling confident that no mistake has been made in taking the schools just as they are, and endeavouring to improve them to the utmost, as the first step towards the improvement of middle-class education.

F. TEMPLE.

*To the Committee appointed for the Management  
of the Prize-Fund of the West of England  
Examination.*

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## C I R C U L A R

*With reference to the preceding Report.*

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DEAR SIR,

Sprydoncote, Exeter, September 5th, 1857.

I beg your acceptance of my third and concluding Publication on Middle-Class Education, containing, among other papers, Mr. Temple's detailed Report on the Exeter Examination of last June.

Knowing as I do the manly spirit in which the leading School-masters in the West of England supported the Examination Scheme from the very beginning, I feel confident that they will find in this Report, after a little reflection, more matter for encouragement than the reverse : I am sure that it deserves the careful consideration of every person interested in Middle-Class Education, not only in the West of England, but elsewhere.

It is true that less space in the Report is occupied by praise than by the suggestion of points open to amendment ; the reasons are obvious : In the first place, the Examination and the Report were but the response to wide-spread demand for inquiry and improvement. If the inquiry had been less searching, if the faults had been buried under compliments, where would have been the means of impressing on the public mind the direction improvements should take ? In the second place, praise must always occupy less space than blame, while blame always attracts most attention. Where work is well done it is enough to say so : the workman needs but to go on as before. Where improvement is needed, it is necessary to be very particular, in pointing out the nature and cause of the defects, that the remedy may suit the case.

It is gratifying to find, that the praise awarded relates to some of the most important points ; while among the defects noted, some may be attributed to causes not under the control of the teacher ; others admit of an easy remedy.

In Mr. Temple's opinion, the teaching of Latin and Mathematics is really sound. These two subjects, as every one knows, form the staple of what is at present taught in Schools, and lay the foundation

for the acquisition of farther knowledge. In singling them out for praise, Mr. Temple has practically pronounced that, on the whole, the Schools from which Candidates appeared are doing what they profess to do.

Nor is the teaching of the Bible, nor that of English History and Literature, considered to fall below the level which boys at school might fairly be expected under the circumstances to reach. Improvements are suggested, but the work done is praised.

Considering the wide extent of the subjects already named, and the disadvantage under which the Masters have hitherto laboured for want of a definite test, whereby to guide the work of the boys and to satisfy parents as to the result, this favourable judgment, from one conversant with institutions in which teaching power of a high order is brought to bear, one also whose position compels him to be guarded in his expressions, is a ground of encouragement and confidence for the future.

On the other hand, there are two or three points in which Mr. Temple considers most of the Schools defective in method, or in which he desires extension of the course of study.

The points on which the method is pronounced defective are, that boys are in many cases pushed on too fast, and that Grammar and Geography are not taught as they should be.

The first of these evils is, beyond all doubt, chiefly due to the impatience and unreasonable expectations of friends; the others in part to the transitional state of the studies themselves involving the difficulties attendant on the introduction of new text-books, and leaving room for considerable difference of opinion as to the right course to be pursued in schools at the present time. The annual examinations, proposed to be held, will protect the Master from interference, by giving a proper prominence to elementary work and to the best text-books. Mr. Temple, in his remarks on grammatical analysis, shows how capable some of the Masters are of turning new tools, put into their hands, to good account.

The subjects to which Mr. Temple thinks that more general attention should be given are French (I think he might have added, German), and Physical Science. In the present position of this Country there can be little doubt that the requirements of the Commercial and Agricultural Classes on these points, are in accordance with Mr. Temple's opinion. He has many opportunities for forming a judgment as to what is desirable for the country at large, but each Master must judge for himself what is desirable for his own

school. The point of chief importance is, not so much what shall be taught, as that it shall be taught thoroughly well.\*

With regard to the general impression of Middle-Class Education in the West of England to be derived from Mr. Temple's Report, I think it ought to be stated, that a considerable number of boys were presented to the Examiners under the avowed conviction on the part of the parents that the effort would do the boys good, although they might have little or no chance of gaining a prize at the first attempt. The average of the attainments was lowered in proportion to the number of such candidates.

I have Mr. Temple's authority for stating, that in throwing the Candidates broadly into two classes, fair and deficient, he classed all as "fair" who rose above a certain standard, but under the same term were included several to whom the term "excellent," and many to whom that of "good," was justly applicable, and those words represent the highest marks assigned in the Council Office Examinations.

I can confidently assert that, while many of the Candidates reached a really high standard in particular subjects, those who obtained prizes were, as a general rule, well grounded in the most essential points. This assertion is confirmed by the fact, that the same names, both of Masters and Pupils, appear with distinction in several departments, and also by a circumstance which I distinctly remember, that the results of the preliminary examination were scrutinized before any Candidate was allowed a place in the class list; some Candidates who failed in the elements lost prizes, which they might have gained if this test had not been rigorously applied.

I feel bound moreover to state my own conviction, that the deficiency in elementary subjects is far less chargeable on the Masters who present Candidates than on neglect before the boys passed into their hands. When, for instance, a habit of incorrect spelling has been acquired through bad teaching in early years, it is most unreasonable for parents to throw the blame on a Master if he cannot relay the foundation and build the superstructure at the same time: a twelvemonth, perhaps, being all that is allowed for both purposes.

The Report does not attempt to distinguish particular schools;

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\* I happen to know that in the case of one School in which French is carefully and well taught, some of the boys did not answer the French paper, taking a second English paper instead.

the prize list is left to speak for itself. Some schools there are to which Mr. Temple's general criticisms would not apply in any sense which ought to raise a shadow of a doubt as to the soundness of their teaching; but it would be hardly possible from the data supplied by one examination to pick them out with such certainty as not to run the risk of doing injustice: on the other hand, many of Mr. Temple's suggestions apply not to the West of England alone, nor to Commercial Schools alone; and there is not a school, high or low, which need be ashamed to take a hint from them.

To my certain knowledge, hearty support was given to the Examination by Masters who expected to gain no credit from it at present, under a strong conviction that it must eventually lead to a more worthy appreciation of sound education. If Mr. Temple had not fearlessly pointed out defects and their causes, the good aimed at would have been lost.

Taking the results of the Examination as a whole, I do not believe that the Schoolmasters in the West of England need fear comparison with their brethren in any part of the country, and they will at least have the satisfaction of knowing that, by their public spirit, they have helped to give a right direction to their own exertions, and thereby to earn for themselves a still higher position in the estimation of their countrymen.

Yours faithfully,

T. D. ACLAND, Junr.

P.S.—Mr. Temple has seen the substance of this circular, and he concurs in what I have said.

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## EVENING MEETING

DURING THE EXAMINATION AT EXETER,

JUNE 18, 1857.

*Speeches of the Rev. F. TEMPLE, Mr. BOWSTEAD, and Professor MAX MÜLLER, and Address of the Schoolmasters.*

THE Rev. F. TEMPLE said—Mr. Mayor, ladies, and gentlemen, I am afraid I am hardly able yet to give anything like a report of the way in which the papers and the other work in the examination have been done, or to say anything in detail about what we found as to the genius or talent there; but at any rate, the meeting of so many pupils for such an examination, and the meeting of so many here on such an occasion as this, is something like an augury from which to calculate what we may expect hereafter, in respect to all that the Mayor is hoping for. (Cheers.) It is to me more than an ordinary pleasure to speak upon such a question to night, because among all the other examiners I have this additional interest—or at least, beyond some of them—that I am a Devonshire man—(cheers)—that I spent all my childhood in Devonshire, and that I owe a debt of gratitude which I shall never be able to repay for the instruction I had from a most excellent teacher in a Devonshire school (Rev. Henry Sanders). (Hear, hear.) From that Devonshire school I found the means of going to the University of Oxford, and ever since I have always found that absence from Devonshire does not, at any rate, diminish that kind feeling which Devonshire men feel towards those who belong to their county. (Cheers.) It is no slight pleasure to me to come down here, deputed by the government of the country, and to meet so many who show such an interest in a movement like that which has been commenced this week, but about which neither I nor any one else can prophesy what the end of it will be. (Hear, hear.) As far as I can see, it will grow to something which I hope will live long after the names who have commenced it have been forgotten. (Cheers.) There is, I think, good reason for hope that this be-

ginning is something really worthy of all that these western counties have hitherto done. There is some foundation for hoping that both from the interest here taken in the movement, and everywhere throughout England, and the hearty and warm reception which it has had from both Universities—(cheers)—that it will go on and prosper. I do not think that when Mr. Aeland first proposed to hold these examinations he himself had the slightest idea—and most certainly when I heard from him I had not the slightest idea—of what was to come out of his proposition. (Hear, hear.) It appeared at first sight to be a proposal to do something towards the improvement of the schools in the western counties, but as it went on, and the more it was discussed, the more it seemed to grow under our hands—it appeared to grow more important every day, and everywhere it was taken up with warmer interest. It was put first before a few members of the Universities, who accepted it, as they said themselves, “with the greatest delight,” and it was only doubted whether it was possible to expect that the country at large would follow up the movement which had been commenced. It was followed up by applying to different parties in the country; and everywhere, as I have said, it was taken up with the warmest interest, and memorials poured in as fast almost as they could receive them, praying the Universities to adopt some scheme—not for the western counties only, but for the whole of England. (Cheers.) These memorials were presented to the Universities, and several of us who were most interested in the subject applied to the authoritatives of Oxford first, and afterwards to Cambridge—explaining what it was we had been thinking of, and how the country was prepared to support it in so hearty a manner if the Universities would take it up. I was in Oxford on a Friday, with several other gentlemen, and appeared before a committee of the hebdomadal council; and they (the council) had a statute printed, and ready to be presented to the council on the Monday following. (Hear, hear.) I was also at Cambridge on a Friday, and on the Monday following the council of that University had their report ready, and were prepared to go forward with the plan—so that both Universities showed the heartiest interest in what was proposed to be done. (Hear, hear.) The interest still continues, and can be seen even at this moment. (Cheers.) We are sorry, indeed, that Dr. Aeland (who would have been here as one of the representatives of Oxford) should not be present. He has, however, evinced all the interest he possibly can by what he has sent here, which is a pleasing addition to the interest of the Meeting

—viz., the specimens which were collected on the shores of the western counties, and which form a part of the Museum at the University. The microscope also he has sent down, with a gentleman who acts as his agent, to show and explain it to all who wish to see it. (Cheers.) This is all that Dr. Acland has been able to do; but it shows how real his interest is, and I may say how really, in this matter, he represents the university to which he belongs. (Hear, hear.) Although, however, he is not here, we have a Professor of Oxford, who was not, indeed, educated at Oxford, but of whom Oxford has learned to be really proud—Professor Max Müller. (Cheers.) That gentleman has come to show the real interest he also feels in what has been done. What, then, is this scheme which we are all met together to support? What is it that Mr. Acland proposes to do? It is this. Mr. Acland felt that whilst there was a great deal said about the improvement of the education of the middle classes—a great deal that was valuable in the way of suggestion—that it was advisable to begin by finding out what we had already got, and to improve that to the utmost. (Hear, hear.) “Let us,” he said, “build on the foundations we already have. Here are a number of schools in the western counties—let us invite pupils in them to come forward to show what they can do. (Hear, hear.) Starting from that point, let us endeavour to give them assistance in improving themselves. Let us endeavour, by pointing out where they have already succeeded and where they are at present deficient, to show them what they are to persevere in, and how the deficiency ought to be supplied.” (Hear, hear.) This is the foundation of Mr. Acland’s plan. It is to take the schools as we find them, and to endeavour to make them as good as it is possible to make them. (Cheers.) This is what he proposes to do for the western counties, and this it is that the University of Oxford proposes to do—if the schools are willing to accept the offer—for the whole of England. The University of Oxford this day has passed the statute—(cheers)—which will commence a system of examinations, and will confer the title of Associate of Arts of the University on all those who come for examination and are able to pass it. (Cheers.) There is the very strongest reason for accepting the offer of the Universities. In fact, I need not say much about the reasons; because the country, without hearing much on that side of the case, have already expressed in the plainest language their wish that the Universities should undertake the work, by the memorials and addresses which were poured into them in such numbers. But there are strong reasons, I say, why they should do it,

and why they can do it better than any other bodies that can be named. Whatever there is in Oxford and Cambridge that is faulty—(and I do not mean to say they have no faults, for I do not know anything very good in this country that is perfect, inasmuch as it seems to be a sort of condition of high excellence that it should have combined with it the actual existence of very frequent faults; and the universities have their faults accordingly, and these faults they are doing their very utmost to amend as fast as they can)—but they have also some great merits. (Hear, hear.) In the first place, the universities have an excellent method of teaching. They may not always have endeavoured to teach the right thing. It is possible that their system is too exclusive, and it may be a great improvement—in fact, I think it would be a great improvement—to introduce other subjects into the university course. The universities have, indeed, already shown that they think this would be an improvement, by enlarging their course so as to admit other subjects which have been hitherto excluded. (Hear, hear.) But within the range of the subjects taught the universities certainly have a method of teaching which I do not think can be rivalled by any in the world—that method of teaching which makes the learning really a part of the learner's mind; and by which the teacher does not merely pour so much knowledge into the learner's head without any consideration as to the effect it will produce upon him. There is a very great difference between stuffing a man's brains with a certain amount of knowledge, and working that knowledge upon his character and upon the powers of his mind so as to turn him out really more of a man than he was before. (Cheers.) It is this latter mode that is the merit of the university system of this country. It is acknowledged everywhere that the men who are turned out of the universities of this country do show that the knowledge they have gained has really been absorbed into their minds and becomes a part of themselves; that they are really elevated above what they were before; and that it has not been merely so much information taken out of a book, and shoved, as it were, bodily into their heads. (Cheers and laughter.) This great merit of the universities constitutes them, beyond all others in Europe, the best guides that can be taken for the improvement of education in general. But there is another merit, and it is this—I have never heard, and I am sure I never shall hear, one single word against the absolute impartiality of their decisions. (Cheers.) The universities are known for this—that when the examiners give their decisions upon

the examination, they may indeed make mistakes—as all men are liable to make mistakes; there may indeed arise errors of judgment, but there is the most rigid and absolute justice as far as man can secure it. (Cheers.) This is a reason why they should be entrusted with such a work as that to which I have alluded. I may add something more—that the universities certainly have running through them a high tone and a high principle, which places them at the head of all education in this country. No man can have lived long in them without feeling that with all their faults, these faults are never such as to interfere with that kind of nobleness of character which has always distinguished them from the first. (Hear, hear.) But, besides all this, there is still something further to be said as the reason for putting the universities forward as the guides of education in this country. There is this to be said—that everything we do for the country at large should be of a character to bind all classes together. (Cheers.) The universities educate the members, or a considerable portion of the members, of what are called the learned professions. The universities also educate the great body of the upper class. It is of the greatest consequence that there should be a strong opinion entertained of the importance of binding together this class with all the other classes in the country; and the universities should be made to feel that they have an interest in the education of all England, and all England should be made to feel that they have an interest in the prosperity and excellence of the universities. (Cheers.) It is with this hope that we have attempted to persuade and have succeeded in persuading the universities to undertake the work; as well as a considerable body who are interested in the education of those who do not go to the universities, to support them. It is gratifying that here in these western counties so many see clearly what ought to be done, and are determined to do it; and what has been done and is doing must be really gratifying to a Devonshire man. (Cheers.) I was asked to speak to you on the subject in general, and on that part of the examination which I have had more particularly entrusted to my charge. That which I have to deal with has been more especially language and literature. The *viva voce* examinations and the papers on these two subjects have chiefly engaged my attention. We lay very great stress upon this part of the examination, because we think that it is of peculiar value. It is so, because it is quite certain that one of the most important things you can do for any man is to teach him

to think clearly, and there is no study which can better conduce towards clearness of thought than the study of language. (Hear, hear.) I mean of course the study of language in a rational way. I do not mean a mere system of routine—a getting up of mere niceties which are to be remembered without the power of using them, but that power of language which enables a man exactly to understand his own words and exactly to understand another man's words. (Hear, hear.) This is the first thing to be said about this branch; and if by *viva voce* questions or questions on paper we can assist in making the study of language something real, as it ought to be—something that will really cultivate the faculties of the learners—then we may consider that on that side of the work we have done what we ought to do. (Hear, hear.) Side by side with the study of language stands that of literature. If some other studies, such as mathematics and other sciences, have a greater value in cultivating the power of clear thinking, literature has the advantage over them in another respect; and that is, by this kind of study you do something more than reach the head,—you also reach the heart. (Hear, hear.) It is through the study of our great writers that we understand the sympathy which binds man to man; it is in the study of the works of great authors—such as Shakespeare, Milton, Burke, and such men as these—that we find that which cultivates something more than merely the man's head. (Hear, hear.) These works not only enable a man to understand his fellow-man, but they make him proud of his country, and they fill him with a warm feeling towards the past, and with hope for the future. (Cheers.) I think now I have said everything I have to say. I hope you will excuse my prolixity, but I have spoken so much because I really feel so much interest in the scheme, and such real exultation in myself in thinking that, whatever is to be done, Devonshire has begun it;—(cheers)—and as a Devonshire man I have to rejoice in seeing it. (Cheers).

J. BOWSTEAD, Esq. (one of her Majesty's Inspectors, and the Examiner in Mathematics), next responded to the call of the chairman, and said he had been deputed to address them on the dry subject of mathematics; and although Devonshire and Devon men were famed for their hospitality, yet his friend (Mr. Templo) had taken to himself in his address all the flowers of literature, and left him (the speaker) the dry leaves of mathematics to decent upon. (Laughter.) He had, however, in his capacity of a school inspector, met with many good mathematicians in the western counties—

indeed one of the most eminent of modern mathematicians, Mr. Adams, the discoverer of the planet Neptune, was a native of the neighbouring county of Cornwall; and, as a school inspector, he could bear testimony that the children in the schools he had visited in Cornwall were the most apt in mathematical knowledge. (Hear, hear.) If children were to be well grounded in mathematical science, the teacher must take pains to address himself to the pupils' understandings—they must teach them thoroughly, for it was vain to put books merely into the hands of children; the proper course in imparting mathematical instruction was to talk with and to the students upon the subject; oral teaching indeed was essential until they could make the subject, so to speak, a part of the boy himself, for the latter must thoroughly understand the proposition he had to prove from the beginning to the end. (Hear, hear.) Instead of laying books merely before the pupils, the great thing was to make them comprehend the propositions—to make the pupils master them; and in that way he felt certain the study of mathematics would not only be a profitable but an exceedingly pleasant study. (Cheers.) He was afraid no poet had ever written a poem on the 'Pleasures of Understanding'—(laughter)—they had already poems on memory and genius, but he should like some inspired mind to take as his poetic theme the understanding; for to feel that a youth knew all about the thing he was studying was one of the most strengthening pleasures to a young man which any person could conceive. (Hear, hear.) He therefore trusted that the study of mathematics would be a leading feature in this scheme of middle-class education which was about to be inaugurated, and that it would be prosecuted in a spirit which would ensure its success. (Cheers.) He must also congratulate the western counties on taking the initiative in this admirable movement, which he (the speaker) considered a most important one; for, up to the present time, the education of the middle-classes had not received that share of attention which was desirable; for how important was that middle class! It carried on the trade of the country; it decided the great questions of law in the capacity of jurymen; in politics they were all-powerful, for the bulk of the electors were taken from this class. (Hear, hear.) At the upper end of the social scale they found the nobility educated at the universities of the country, and there tested by examinations which were not exceeded, if equalled, by any examinations in any part of the world. (Cheers.) At the

other end of the social scale they had now efficient schools for the working classes, aided by large grants of money from the public funds of the country, and inspected by officers appointed by Government, and in a great measure supported by the voluntary offerings of those of the upper and middle classes who took a warm interest in the education of the working-classes. (Hear, hear.) While then they were doing so much in the matter of education for the two extremes of the social scale, he (the speaker) congratulated these western counties on doing something for the middle classes, and with doing it also so well (hear, hear); for these examinations had been conducted upon the fairest and broadest and most admirable principles; they said to every boy that came before them, "Show us your attainments." They proposed no test; the boys might choose the subject upon which they were examined, and if they succeeded, they would make that award which was held out without favour to the boy that displayed the best attainments in that particular branch of study. (Hear, hear.) Of course, he (the speaker) had had an opportunity of knowing the arrangements as to obtaining the results of these examinations, and he could assure them that whatever could be done to ensure impartiality, and to give the awards without favour or affection, would be done to obtain the real results in every department of the examination. (Cheers.) All that good faith and industry could do to give a boy the benefit of his labour in preparation would be done on this occasion. (Hear, hear.) Of course, in examinations of such a character it was impossible for every boy to succeed; but, speaking roughly, he considered the boys generally had acquitted themselves with great credit (cheers); and there was no reason to think that that good character which the Mayor had given to the West Country had departed from it—(hear, hear)—for they had that very day talent evinced which the examiners were astonished at—a striking instance of a mind of the utmost power and appreciation in a very young boy whom, of course, he (the speaker) would not name; but he sincerely trusted that he and a great many other boys would live to be a credit and honour to the county in which they were brought up. (Cheers.) He was not less happy than Mr. Temple to be deputed to take part in these examinations; and he considered it a pleasure and an honour to be present at that meeting, for he believed this to be the beginning of a something which they could not see the end of, and which many of those present would have occasion

to remember with pleasure. (Hear, hear.) Mr. Bowstead resumed his seat amid applause, by thanking the company for the patience with which they had listened to his remarks.

Professor MAX MÜLLER said: Mr. Mayor, Ladies, and Gentlemen,—I am sure you will agree with me, that after the appeal made by the Mayor, and the kind words spoken by Mr. Temple, it would be impossible for me to remain silent. At the same time I must say, and I am sure you will believe me, and excuse me for saying so, that I never felt so uncomfortable in my life as when I perceived that I should have to address this meeting. (Laughter.) I have never spoken in public before, not even in my own native language. And here I stand before you as a stranger, having to address you in a strange language, and finding myself all on a sudden in a position altogether strange to me. I cannot appeal to your sympathies like Mr. Temple. I cannot say like him, "Gentlemen, I am a Devonshire man." I am not a native of Devon—nor even of that other county which Mr. Bowstead said he was proud of, though he would not name it—(laughter)—I am not even a native of England. I am a foreigner—I am a German. But still, like Mr. Temple, and like Mr. Bowstead, I will say that I am proud of my own country. (Cheers.) I shall speak to you as what I am, as a German, who feels himself at home in England, not as one who would like to pass himself off as an Englishman. (Hear, hear.) And do not think that I stand here to speak the sentiments of Oxford, though it is in connexion with the University that my name was mentioned to you by the Mayor and Mr. Temple. Up to the last moment we all expected to have among us, occupying the place which I occupy so unworthily, one of the most distinguished Professors of Oxford. He might well have explained to you in this place the sentiments of Oxford on the important subject in which you all take so lively an interest. You are aware that he is absent to-night from a sad cause. He persuaded me to come with him to Exeter in order to see the first experiment of a scheme of national education, and to take my small share in the examination. I gladly agreed to go as his second, and I never expected to find myself deserted by him, and to have to address you as his deputy. But though I stand before you as a stranger, I do not feel quite a stranger among you. When I look at the candidates assembled in this room who came to Exeter to be examined, and whose exertions the University of Oxford intends for the future to acknowledge and to encourage by conferring on them the degree of Associate in Arts, I remember that I am myself the first Associate

in Arts—(cheers)—and that as such I may perhaps claim your sympathy and attention. The University of Oxford some years ago did me the honour of making me an Associate by conferring on me a degree, and confiding to me the duties of professor. Now, I can assure you, that this is a distinction which I value highly. I hardly know any that I should value more highly; and therefore I doubt not that the honour which Oxford holds out to you, and to the large middle classes of the country, will be valued in the same spirit. (Hear, hear.) Not being prepared that I should have to address you on the subject of Middle-Class Education, and the impetus that is likely to be given to it by public examinations, I hardly know what to say. Perhaps it will be best if I tell you how it happened that I stand here at the present moment. I met Mr. Acland at Oxford during last term. He looked very busy, and, in walking up and down High Street, he communicated to me, in a few telling words, his scheme of Middle-Class Education. I had myself watched with great interest the gradual growth of the examination-system in England—a system that has been worked to its utmost limits in Germany, and which, like every human system, is productive both of good and of evil. It had struck me several times that between the schools which teach Greek and Latin, and which supply candidates for the Universities and for the civil and military examinations in London, and the schools that come under the inspection of the Educational Committee of the Privy Council, there must be a number of schools over which no public body exercised as yet any public control. So, when I heard from Mr. Acland about his scheme for examining the middle-class schools, I almost fancied I had heard of it before. I felt, on hearing it, as we sometimes feel when seeing for the first time a perfect stranger. We imagine we have seen him or heard his voice before; and from my own experience I may say that these strangers are apt to turn out in the course of time our best friends. It was with a similar feeling that I listened to Mr. Acland's scheme, and the same feeling seems, indeed, to have been shared by everybody. It was the right scheme at the right time. As soon as Mr. Acland's proposition became known at Oxford it met with the most hearty reception, and an almost unanimous approval. Oxford, as you know, is not a place where novel ideas are likely to prosper. Oxford is generally considered to be a conservative—ay, even an obstructive or exclusive—place. Now, in the good sense of the word, I admit that Oxford is conservative; but in no other sense. I believe that what the

Duke of Wellington said of England may be applied to Oxford. The Duke said, "England could not afford to wage little wars;" and we may say of Oxford, that it cannot afford to carry every little measure of reform. But let a good, broad, and large measure be put before the University of Oxford, and, however novel or foreign it may seem, I maintain that you will find old Oxford as liberal as any association or corporation in England. (Cheers.) The University of Oxford has this day sanctioned the degree of Associate in Arts. It has broken down the ancient barriers which divided classical from practical learning. This is a revolution at which the most revolutionary professors of Germany and France will stand aghast. And if you look back to the history of the Universities in Europe, you will admit that it is a revolution, that it is a great change, and, we may add, a sign of life and health. Yet we must not allow ourselves to be carried away by a feeling of exultation at the triumphant success of so liberal a measure at Oxford. We ought to look at this victory only as a beginning. It is the landing in the Crimea, but the great battles are still to come. For, after all, what is a degree, and what is a title? In looking for an answer, I am reminded of an epigram of my father's. He was a German poet, and when he wrote these lines in the small city of Dessau, now thirty years ago, he never dreamed that the time would come when his son should quote them in one of the ancient cathedral towns of England. (Hear, hear.) The poet said,\* "What is a title? what is nobility? It is zero: put a good figure before it, and that figure will count tenfold,"—(laughter and cheers)—but, we may go on, if the title comes first, as the principal thing in a man, and his own figure come afterwards, that figure is reduced by the zero before it to a decimal fraction. (Hear, hear.) We have got the title, but we want the figures. Four hundred years ago the title of Master of Arts did not count much. It has since received a meaning and a value by and through those who took it. The degree of Associate in Arts has no value as yet, but the making of it rests with us. It rests with the schoolmasters, and it rests with the Universities. If the schoolmasters will train their boys properly, if they will teach them things worth knowing, and teach, whatever they teach, thoroughly and honestly, there is no reason why the degree of Associate in Arts, though not a degree of so high a class as Master

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\* Ahnen sind für den nur Nullen, der als Null zu ihnen tritt,  
Steh'als Zahl an ihrer Spitze, und die Nullen zählen mit.

of Arts, should not be in time respected as much by the country, and become worth having in the market of life. But there are new duties imposed on the Universities also. The resident members of the Universities enjoy many privileges ; they are supplied with all intellectual luxuries—after all, the only luxuries worth having ;—and in the midst of the noisy struggles of the nineteenth century, they enjoy the repose and comforts of the middle ages, heightened by the discoveries of our own times. Such privileges, conferred and sanctioned by the nation, involve duties towards the nation, and it is the interest of the Universities that it should not be said that any of these duties have been neglected. It has been said that Oxford sends out into the world men, not books. But Oxford ought to send out both men and books, and the Oxford books ought to be of the same stamp as the Oxford men—*popular* in the best sense of the word. There is no kind of knowledge, however special and abstruse, that cannot be rendered popular by proper treatment ; and as the great discoveries in physical and mechanical science have been made chiefly by simplification, it is the duty of the scholar, the historian, and the philosopher, to simplify as a teacher what he found confused and complicated as a learner. Oxford ought to give to the country in return for the many benefits which it has received, and still receives, books that will benefit the country, and I am chiefly thinking of school-books. Let Oxford produce works of deep and original research, which will secure to it an honourable place among the universities of Europe. But as an English University, as the University of a country where every man is expected to work for the common weal, Oxford ought to produce works for the people—popular works ; works embodying the results of long labour, but in a form at once clear and easy, simple, attractive, and impressive. There is no lack of men at Oxford who could write such books : good grammars, I mean ; histories of Rome, Greece, and England ; manuals of literary history, of geography ; treatises on the various branches of physical and mechanical science, &c. It requires an effort to write such books. It involves a sacrifice, particularly for men who indulge in the pleasures of reading and taking in knowledge. But the effort ought to be made, and it will be made as soon as it is felt as a duty. Oxford ought to send out good men, but it ought to send out good books also. A man may influence his thousands, but a book will influence its ten thousands. The fathers of the Church, the fathers and founders of poetry, of philosophy, of science, and of every branch of knowledge,

all of them did their work, not by teaching only, but by writing. Let us hope, therefore, that Oxford, by being brought again into closer contact with the requirements of the country at large, will contribute its share towards the successful working of the scheme which has been inaugurated to-day at Exeter. If this is the case, the measure which was passed to-day at Oxford will, like every liberal measure, confer benefits, not only on the receiver, but on the giver also. (Hear, hear.) And I believe that for many years, nay, for many centuries, to come, this county of Devon, and this city of Exeter, will have reason to be proud that this scheme of Middle-Class Education has been originated, and has hitherto been so successfully carried out chiefly by Devonshire men, such as Mr. Acland, Mr. Temple, and those who think, and feel, and work with them.

Mr. TEMPLETON, of Mansion House School, Exeter, presented himself, and said it became his duty, on behalf of the schoolmasters of Somerset, Devon, and Cornwall, who had taken a part in this examination, to present their thanks to the committee and the examiners, for the satisfactory manner in which the examinations had been conducted. If a learned professor, who had the command of all the languages in the world, felt a difficulty in addressing such an audience, how must he feel after hearing the heart-stirring speech from Mr. Temple, the excellent address from the Chancellor Harington, and the practical remarks of Mr. Bowstead? The schoolmasters and teachers of Somerset, Devon, and Cornwall, had met and considered it their duty to address the committee on this occasion, and to add a few words of thanks to that committee and also to the examiners, as well as to memorialise the two Universities. Like the prophet cloud which first appeared about the size of a man's hand, this movement now going on relative to middle-class education was overspreading the land. They had commenced a middle-class education examination in the West of England; this was a great event, and it showed how much they owed to the gentlemen who had promoted the scheme for the last six months. His fellow-schoolmasters around him were like the men in the late war, for they were volunteers, not being compelled to come in. But every schoolmaster should come forward. The prizes were offered to their pupils, and for the credit of their pupils they must come forward. The movement was originated by gentlemen he saw around him, and these had procured the aid of Her Majesty's Inspector; and he hoped these gentlemen would find that the schoolmasters were desirous to promote education, and that they did try to do their duty. He hoped

they would also find that middle-class education was not a sham and a pretence, and that the schoolmasters did not bow their knees to Baal. The meeting of schoolmasters that morning was of a pleasing and cheering character : there were hearty and unanimous resolutions passed by them pledging themselves to do their best in the promotion of the scheme, and hearty thanks were voted to those gentlemen who came forward to offer those prizes. The offering prizes to pupils was clearly the best means to urge the schoolmaster to do his duty, and to engender in the pupils an honourable rivalry. *At the meeting every schoolmaster in the city—either residing or visiting—was present : some of the gentlemen were from Somerset, many from Devon, and some from Cornwall.* After thanking the committee the meeting resolved to thank the Rev. Chancellor Harington, Rev. Mr. Temple, J. Bowstead, Esq., and Professor Max Müller, and other examiners, for their great accessibility and courtesy shown to those engaged in tuition. He was sure that what Mr. Temple said with regard to the University examination could fully be borne out in their examination, for he was sure that the schoolmasters and pupils would receive evenhanded justice, as far as the intellect of the examiners could be brought to bear on the examinations. In the name of himself and the gentlemen whom he represented, he begged to return their sincere thanks to the committee. Mr. Templeton here read the document drawn up at the meeting.

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## RESOLUTIONS

*Of Schoolmasters and Teachers present at the Examination.*

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AT a meeting of the Schoolmasters and Teachers present at the Examination, June 18, 1857, Mr. Templeton, M.A., in the Chair, it was unanimously resolved—

That the thanks of this meeting are due to Sir John Kennaway, Bart., President; the Right Worshipful the Mayor; Messrs. Passmore and Hussey, Treasurers; T. D. Acland, Esq., Secretary; the Rev. H. Mitchell, Assistant Examination-Secretary, and other members of the Committee, for their liberality and zeal in promoting this scheme of Examination.

That a vote of thanks be presented to the Rev. F. Temple, J. Bowstead, Esq., the Rev. Chancellor Harington, Professor Max Müller, and other Examiners, for the laborious duties which they have undertaken on the present occasion, and the great accessibility and courtesy shown by them to those engaged in tuition.

That a Memorial be presented to the Universities of Oxford and Cambridge upon the subject.

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## MEMORIAL

*Addressed to the Vice-Chancellor and other Members of the Councils of the Universities of Oxford and Cambridge.*

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WE, the undersigned Schoolmasters and Teachers from Somerset, Devon, and Cornwall, now assembled in Exeter during the Public Examination for Prizes offered by several gentlemen who take a deep interest in the Education of the Middle Classes, beg to memorialise your Body.

We are aware of the movement now being made at both Universities to connect them more closely with the Middle Classes by authorizing a system of Annual Examinations throughout the whole country, and giving the candidates who distinguish themselves an honorary title.

We know from experience in preparing our own pupils for the Examination now going on in Exeter, what a benefit it is to give to

different middle-class schools a unity of action, and to boys a stimulus and an object to work for, which they never had before.

We therefore respectfully beg the Members of the Council of the University of Oxford to establish such Examinations, and to grant to successful candidates the title of A.A., or such other mark of distinction as the University may approve of.

- (Signed) JAMES TEMPLETON, M.A., *Exeter.*  
S. M. RIDGWAY, LL.D., *Exeter.*  
EDMUND T. FOWERAKER, *Cathedral Close School, Exeter.*  
EDW. HY. SHORTO, " "  
THOMAS WM. SMITH, *Timberscombe.*  
WILLIAM W. HOLMAN, *Cutcombe.*  
JOHN JACKMAN, *Moretonhampstead.*  
HENRY MARTYR CROWTHER, M.A., *St. John's College, Cambridge, Head Master of Kingsbridge School.*  
EMANUEL DOMMETT, *Head Master, Hele's School, Exeter.*  
M. GUERITZ, M.A., *Yealmpton School.*  
W. CORNER, *Wellington.*  
GEORGE DENNIS, *Kentisbeare.*  
H. S. YOUNG, *Exeter.*  
PHILIP PAIGE, *Tor, Torquay.*  
NICHOLAS MENNEER, *St. Marychurch, Torquay.*
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## UNIVERSITY OF CAMBRIDGE.

### REGULATIONS FOR THE YEAR 1858 CONCERNING THE EXAMINATION OF STUDENTS WHO ARE NOT MEMBERS OF THE UNIVERSITY.

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THERE will be two Examinations, commencing on Tuesday, December 14th, 1858: one for Students who are under 16 years of age, and the other for Students who are under 18 years of age.

Students will be examined in such places as the Syndics, appointed by the University, may determine.

After each Examination the names of the Students who pass with credit will be placed alphabetically in three honour classes, and the names of those who pass to the satisfaction of the Examiners, yet not so as to deserve honours, will be placed alphabetically in a fourth class. After the name of every Student will be added his place of residence, and the school (if any) from which he comes to attend the Examination.

In determining the classes, account will be taken of every part of the Examination; but no credit will be given for knowledge in any subject, unless the Student shows enough to satisfy the Examiners in that subject. Regard will be paid to the handwriting and spelling throughout the Examinations.

The Students who pass with credit, or satisfy the Examiners, will also be entitled to receive Certificates to that effect. Every Certificate will specify the subjects in which the Student has passed with credit, or satisfied the Examiners, and the class in which his name is placed.

Every one admitted to Examination will be required to pay a fee of twenty shillings.

#### EXAMINATION OF STUDENTS WHO ARE UNDER 16 YEARS OF AGE.

Students must be under 16 years of age on the day when the Examination begins.

#### PART I. PRELIMINARY.

Every Student will be required to satisfy the Examiners in

1. Reading aloud a passage from some standard English prose author.
2. Writing from Dictation.

3. The analysis and parsing of a passage from some standard English author.
4. The first four rules of Arithmetic, simple and compound, Vulgar Fractions, Practice, and the Rule of Three.
5. Geography :

Every Student will be required to answer questions on the subject, and to draw from memory an outline map showing the coast-line, the chief ranges of mountains, and the chief rivers of one of the countries in the following list :

England, Scotland, Ireland, Europe, Asia, Africa, North America, South America, Australasia.

6. The outlines of English History since the Conquest ; that is, the succession of Sovereigns, the chief events, and some account of the leading men in each reign.

## PART II.

The Examination will comprise the subjects mentioned in the following ten Sections, and every Student will be required to satisfy the Examiners in three of those Sections at least, but no one will be examined in more than six. Section I. must be one of the three, unless the parents or guardians of the Student object to his examination in that Section.

### 1. Religious knowledge :

Questions will be set on

- (a) The two Books of Samuel, the Gospel of St. Matthew, and the Acts of the Apostles ;
- (b) The Church Catechism ;
- (c) Whately's *Easy Lessons on Christian Evidences*.

Every Student who is examined in this Section will be required to satisfy the Examiners in the subject marked (a), and in one at least of the subjects marked (b) and (c).

### 2. English :

Every Student who is examined in this Section will be required to write an original English composition.

He will also be examined in

- English History, from the battle of Bosworth Field to the Restoration ;
- Physical, Political, and Commercial Geography ;
- Trench, *On the Study of Words*.

### 3. Latin :

Passages will be given from Sallust's *Bellum Catilinarium* and

Virgil's *Aeneid*, Book vi., for translation into English, with questions on the parsing and the historical and geographical allusions ;

Also an easy passage for translation from some other Latin author ;

And a passage of English, with Latin words supplied, for translation into Latin.

#### 4. Greek :

Passages will be given from Xenophon's *Anabasis*, Book ii., and Homer's *Iliad*, Book vi., for translation into English, with questions on the parsing and the historical and geographical allusions ;

Also an easy passage for translation from some other Greek author.

#### 5. French :

Passages will be given from Voltaire's *Charles XII.*, for translation into English, with questions on the parsing and the historical and geographical allusions ;

Also a passage from some modern French author for translation into English ;

And easy English sentences for translation into French.

#### 6. German :

Passages will be given from Lessing's *Fables*, Prose and Verse, for translation into English, with questions on the parsing ;

Also a passage from some modern German author for translation into English ;

And easy English sentences for translation into German.

#### 7. Pure Mathematics :

Every Student who is examined in this Section will be required to satisfy the Examiners in Euclid, Books i. and ii., Arithmetic, and Algebra to simple Equations inclusive.

Credit will be given for a knowledge of Book-keeping.

Questions will also be set in Euclid, Books iii., iv., and vi., in Quadratic Equations, Progressions, Proportion, Plane Trigonometry not beyond the solution of Triangles, the use of Logarithms and Mensuration.

#### 8. The elementary principles of Mechanics and Hydrostatics :

Questions will be set, embracing the proofs of the leading Propositions.

In Mechanics they will not extend beyond the parallelogram of forces, the centre of gravity, and the mechanical powers.

In Hydrostatics they will not extend beyond the transmission of fluid pressure, the equilibrium of inelastic fluids and of floating

bodies, and the description of the steam-engine and of simple hydraulic machines.

A fair knowledge of Mechanics will enable a Student to pass in this Section.

**9. Chemistry :**

Questions will be set on the elementary facts of Chemistry and the laws of chemical combination.

Solutions will be given to be tested, containing not more than one acid and one base.

**10. Zoology and Botany :**

Elementary questions will be set on the description and classification of Animals, their habits and geographical distribution ; and on the mercantile and industrial uses of animal products :

Also on the description and classification of Plants, their uses and geographical distribution :

British plants and parts of plants will be given for description.

**PART III.**

Students may also offer themselves for Examination in

1. Geometrical and Mechanical Drawing.
2. Drawing from the Flat, from Models, from Memory, and in Perspective.
3. The Grammar of Music.

**EXAMINATION OF STUDENTS WHO ARE UNDER 18 YEARS  
OF AGE.**

Students must be under 18 years of age on the day when the Examination begins.

**PART I.—PRELIMINARY.**

Every Student will be required to satisfy the Examiners in

1. Reading aloud a passage from some standard English poet.
2. Writing from Dictation.
3. Analysis of English sentences and parsing.
4. Writing a short English composition.
5. The principles and practice of Arithmetic.
6. Geography :

Every Student will be required to answer questions on the subject, and to draw from memory an outline map of some country in Europe, showing the boundary lines, the chief ranges of mountains, the chief rivers, and the chief towns.

7. The outlines of English History; that is, the succession of Sovereigns, the chief events, and some account of the leading men in each reign.

### PART II.

The Examination will comprise the subjects mentioned in the following eight sections; and every Student will be required to satisfy the Examiners in three at least of the sections marked A, B, C, D, E, F; or in two of them, and in one of the sections marked G, H: but no one will be examined in more than five. Section A must be taken by every Student, unless his parents or guardians object to his examination in that section.

#### SECTION A.

Religious knowledge:

The Examination will consist of questions in

1. The Historical Scriptures of the Old Testament to the death of Solomon.

The Gospel of St. Luke and the Acts of the Apostles: credit will be given for a knowledge of the original Greek.

2. The Morning and Evening Services in the Book of Common Prayer; and the Apostles' Creed.

3. Paley's *Horæ Paulinæ*.

Every Student who is examined in this section will be required to satisfy the Examiners in the subject marked 1, and in one at least of the subjects marked 2 and 3.

#### SECTION B.

1. English History, from the battle of Bosworth Field to the Restoration; and the outlines of English Literature during the same period.

2. Shakspeare's *Julius Cæsar* (Craik's edition).

3. The outlines of Political Economy and English Law:

The Examination will not extend beyond the subjects treated of in the first book of Smith's *Wealth of Nations*, and the first volume of Blackstone's *Commentaries*.

4. Physical, Political, and Commercial Geography.

A fair knowledge of one of these four divisions will enable a Student to pass in this section.

#### SECTION C.

1. Latin:

Passages will be given from Livy, Book xxi., and Horace, *Odes*, Book iii., for translation into English, with questions on the historical and geographical allusions, and on Grammar;

Also passages for translation from some other Latin authors ;  
And a passage of English for translation into Latin.

2. Greek :

Passages will be given from the *Olynthiacs* of Demosthenes, and the *Alcestis* of Euripides, for translation into English, with questions on the historical and geographical allusions, and on Grammar ;

Also passages for translation from some other Greek authors.

3. French :

Passages will be given from La Bruyère's *Characters*, and Molière's *Misanthrope*, for translation into English, with questions on Grammar ;

Also passages from some other French authors for translation into English ;

And a passage of English for translation into French.

4. German :

Passages will be given from Schiller's *History of the Revolt of the Netherlands*, and Goethe's *Hermann and Dorothea*, for translation into English, with questions on the historical and geographical allusions, and on Grammar ;

Also passages from some other German authors for translation into English ;

And a passage of English for translation into German.

A fair knowledge of one of these four languages will enable a Student to pass in this section.

#### SECTION D.

Every Student who is examined in this section will be required to satisfy the Examiners in

Euclid, Books i., ii., iii., iv., vi., and xi. to Prop. 21, inclusive.

Arithmetic and Algebra.

Questions will also be set in the following subjects :

Plane Trigonometry, including Land-surveying.

The simpler properties of the Conic Sections.

The elementary parts of Statics, including the equilibrium of forces acting in one plane, the laws of friction, the conditions of stable and unstable equilibrium, and the principle of virtual velocities.

The elementary parts of Dynamics, namely, the doctrines of uniform and uniformly accelerated motion, of projectiles and collision.

The elements of Mechanism.

The elementary parts of Hydrostatics, namely, the pressure of elastic and inelastic fluids, specific gravities, floating bodies, and the construction and use of the more simple instruments and machines.

The elementary parts of Optics, namely, the laws of reflection and refraction of rays at plane and spherical surfaces (not including aberrations), lenses, the phenomena of vision, the eye, microscopes, and telescopes.

The elementary parts of Astronomy, so far as they are necessary for the explanation of the more simple phenomena, together with descriptions of the essential instruments of an Observatory; and Nautical Astronomy.

#### SECTION E.

##### 1. Chemistry:

Questions will be set on the facts and general principles of Chemical science.

There will also be a practical examination in the elements of Analysis.

##### 2. The experimental laws and elementary principles of Heat, Magnetism, and Electricity.

##### 3. The elementary principles of Physical Optics according to the Undulatory Theory, and Acoustics, with descriptions of the fundamental experiments.

A fair knowledge of Inorganic Chemistry, or of one of the divisions 2 and 3, will enable a Student to pass in this section.

#### SECTION F.

##### 1. Comparative Anatomy and Animal Physiology:

The Examination will be confined to the active and passive organs of locomotion.

##### 2. Botany, and the elements of Vegetable Physiology.

##### 3. Physical Geography and Geology:

Explanations of Geological terms will be required, and simple questions set respecting stratified and unstratified rocks, the modes of their formation, and organic remains.

A fair knowledge of one of these three divisions, including a practical acquaintance with specimens, will enable a Student to pass in this section.

#### SECTION G.

Drawing from the Flat, from Models, from Memory, and in Perspective; and Drawing of Plans, Sections, and Elevations.

Design in pen and ink, and in colour.

A fair degree of skill in free-hand drawing will be required in order that a Student may pass in this section.

Questions also will be set on the history and principles of the arts of Design.

## SECTION H.

The Grammar of Music.

The history and principles of Musical Composition.

A knowledge of the elements of Thorough Bass will be required, in order that a Student may pass in this section.

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Local Committees, wishing to have examinations held in their several districts, may obtain all necessary information from the Vice-Chancellor of the University.

Applications on behalf of Students desiring to be examined at Cambridge must be made on or before November 1, 1858.

Applications from Local Committees for examinations to be held in their districts must be made on or before October 1, and the probable number of Students to be examined must be then stated. The names of such Students must be sent to the Vice-Chancellor on or before November 1, 1858, together with statements of the subjects in which they will offer themselves for examination.

The fees for all Students must be paid on or before November 1, 1858.

H. PHILPOTT, *Vice-Chancellor.*

*Cambridge, March 25, 1858.*

## UNIVERSITY OF DURHAM.

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EXAMINATION OF PERSONS NOT MEMBERS OF THE  
UNIVERSITY, 1858.

THE Examination will commence at Durham on Monday, October 11, 1858, at two o'clock.

Junior and Senior Candidates will be examined at the same time, but the two Examinations will be different.

Every Junior Candidate must be between the ages of 14 and 16, and every Senior Candidate between the ages of 16 and 18; and must send in his name to the Senior Proctor on or before June 7, 1858, forwarding at the same time a Certificate of his age, and a notice of his place of residence, and school, if any, from which he comes. Each Candidate who proposes to pass any of the Examinations B, C, or D, hereafter described, must at the same time state in which of these Examinations, and in what subjects under each, he wishes to be examined.

Every Junior Candidate will pay a fee of 10s. before his admission to the Examination.

Every Senior Candidate will pay a fee of 20s. before his admission to the Examination.

The Examinations for Junior and Senior Candidates will each consist of four divisions, namely :—

Examination A, which will be directed (1) to the Elements of Christianity, as contained in the Bible and the Book of Common Prayer; (2) to English Grammar, Composition, and Literature; (3) to Arithmetic; (4) to Geography and History.

Examination B, which will be directed to the Latin, French, and German, and such other Language or Languages as may be appointed by the Warden and Senate.

Examination C, which will be directed to Mathematics, pure and applied.

Examination D, which will be directed to Physical Science and Art.

Every Candidate, whether Junior or Senior, will be required to pass Examination A; and no one who fails to pass it will be allowed to pass any of the other Examinations. But if any Candidate, with the consent of his Parent or Guardian, make application to be exempted from branch 1 of Examination A, the Warden and Senate have authority to grant such exemption.

The application for such exemption must be made at or before the time when the Candidate sends in his name for admission, and must be accompanied by a statement of the grounds on which the application is made.

All who pass any of these Examinations will be classed. Those who pass with distinction will be arranged in as many classes as the Examiners think fit, provided that the number of these classes does not exceed three. The rest will be placed together in one class. The order in each class will be alphabetical. There will be a separate classification for each of the four Examinations.

After the name of each successful Candidate will be inserted on the Class List his age, the place of his residence, and the school, if any, from which he comes.

Every Candidate who passes any one of these Examinations will receive a Certificate. A separate Certificate will be given for each of the four Examinations. The Certificate will specify the subjects in which the Candidate has satisfied the Examiners, and the class in which he has been placed.

Every one who at the Examination for Senior Candidates passes Examination A, and any one of the other Examinations also, will, in addition to a Certificate, receive the title of Literate.

The Warden and Senate have authority to fix any additional subject, provided that such subject is not fixed later than six weeks before the Examination, and is not considered necessary.

If any Candidate desires to be examined in any additional subject, he must apply, on or before June 7, 1858, to the Senior Proctor, who will submit his application to the Warden and Senate.

The Examinations will be made partly by written answers to questions, and partly *vivâ voce* at the discretion of the Examiners.

#### SUBJECTS OF EXAMINATION FOR JUNIOR CANDIDATES.

##### EXAMINATION A.

1. The Book of Genesis, the Gospel of St. Matthew, the Morning Prayer.
2. Reading aloud.  
Writing from Dictation.

The Analysis and Parsing of a passage taken from Goldsmith's Traveller.

N.B.—Orthography and the handwriting will be taken into account.

3. The first four Rules of Arithmetic, simple and compound.
4. An Outline Map from memory, showing the coast-line, the chief ranges of mountains, and the chief rivers of one of the following countries, viz., England and Wales, Scotland, Ireland.

Questions also will be set on the Geography of the same countries.

The outlines of English History from the Conquest to the Reign of Henry VIII. inclusive.

All the Candidates, except those who are exempted from branch 1, will be required to pass in the above-named subjects.

There will also be an Examination in the following additional subjects :—

1. The Acts of the Apostles.
2. English Composition, to be tested by the narrative of some event, description of some place, or the like Exercise.
3. Rule of Three, Practice, Vulgar and Decimal Fractions.
4. An Outline Map, showing the coast-line, the chief ranges of mountains, and the chief rivers of one of the following countries, viz., Europe, India, North America.

Questions also will be set on the Geography of the same countries.

The outlines of English History from Edward VI. to George III., both inclusive.

#### EXAMINATION B.—*Latin.*

1. Grammar.
2. Cæsar de Bello Gallico, Book i. Translation of one or more passages, with Grammatical, Geographical, and Historical questions.

Translation of an easy passage from some other Latin book.

3. Translation into Latin of a piece of English, with Latin words supplied.

#### *French.*

1. Grammar.
2. Translation from Voltaire's Charles XII., with Grammatical, Geographical, and Historical questions.

Translation of a passage from some other French prose work.

3. Easy sentences of English to be translated into French.
4. Each Candidate will be required to read a passage aloud.

*German.*

1. Grammar.
2. Translation from Lessing's Fables.  
Translation of a passage from some other German work.
3. Easy sentences of English to be translated into German.
4. Each Candidate will be required to read a passage aloud.  
A knowledge of one only of these three languages will be required.

## EXAMINATION C.

Euclid, Books i., ii.

Arithmetic.

Algebra, to Simple Equations inclusive.

A knowledge of these subjects will enable a Candidate to pass his Examination.

Questions will also be set in—

Euclid iii., iv. First twelve definitions of Book v. and Book vi.

Algebra, Quadratic Equations, Progressions, and Proportion.

Trigonometry, to the solution of Triangles, inclusive.

The use of Logarithms.

Mensuration and Practical Geometry.

## EXAMINATION D.

1. Elementary Chemistry. Questions will be set on elementary facts.

Chemical Solutions will be given to be tested, each containing not more than one acid and one base.

2. Mechanics and Mechanism.

The questions on Mechanics will be chiefly of a practical nature, and will not extend beyond the parallelogram of forces, the centre of gravity, and the mechanical powers.

The questions on Mechanism will be confined to the Steam Engine in its simpler forms.

The answers must be illustrated by Diagrams or Drawings.

Great importance will be attached to good drawing.

3. Popular Astronomy, and the use of the Terrestrial and Celestial Globes.

Any Candidate who has passed Examination A may also offer himself for examination in Drawing.

No Candidate will be examined in more than two of the above subjects; and a Certificate will be granted to any Candidate who passes a satisfactory examination in any one of these three subjects.

## SUBJECTS OF EXAMINATION FOR SENIOR CANDIDATES.

## EXAMINATION A.

1. The Books of Genesis, Exodus, and Joshua.  
The Gospel of St. Matthew.  
The Morning Prayer.
2. Reading aloud.  
Writing from Dictation.  
Analysis and Parsing of English sentences.  
English Composition, to be tested by the narrative of some event, description of some place, or the like Exercise.  
N.B. Orthography and the handwriting will be taken into account.
3. Arithmetic.
4. An Outline Map of some country in Europe, showing the boundary lines, the chief ranges of mountains, the chief rivers, and the chief towns.  
Questions also will be set in the Geography of Europe.  
The outlines of the History of England, from the Invasion by the Romans to the end of the reign of George III.

All the Candidates, except those who are exempted from branch 1, will be required to pass in the above-named subjects.

There will also be an Examination in the following additional subjects :—

1. The Acts of the Apostles, and the Catechism.
2. Shakspeare's Henry VIII.  
Writing the substance of a passage from some English Author read aloud.
3. Arithmetic, higher questions.
4. Ancient and Modern Geography of Palestine.  
History of the reigns of Henry VIII., Edward VI., and Queen Mary.  
Notices of the chief English writers from the Restoration of Charles II. to the death of Queen Anne.

EXAMINATION B.—*Latin.*

1. Grammar.
2. Translations, with questions—  
Cæsar de Bello Gallico, Lib. i., ii., iii.  
Cicero de Amicitia.

Virgil, *Aeneid*, Lib. i., ii., iii.

Horace, *Odes*, Lib. i., ii.

No Candidate will be required to pass in more than two of these subjects.

A paper for translation from some other Latin work.

3. A passage of English to be translated into Latin.

*French or German.*

1. Grammar.

2. Translations of passages in French or German, prose and verse.

3. Translation of a passage of English into French or German.

4. Each Candidate will be required to read a passage aloud.

A knowledge of one only of these three languages will be required.

EXAMINATION C.

Euclid, i., ii., iii., iv., vi., xi.

In Book v. will be required the Definitions and Axioms, Propositions 1 to 16, omitting 5 and 6, and Propositions 20 and 22. In Book xi. Propositions 1-21 inclusive.

Arithmetic and Algebra.

Plane Trigonometry, with the use of Surveying Instruments.

Geometrical Conic Sections.

Mechanics, including Statics and Dynamics.

Hydrostatics.

The questions in the last two subjects will be such as can be solved by means of the Pure Mathematics in the first four.

In order to pass this Examination, a Candidate must show a knowledge of, at least, four books of Euclid, Arithmetic, Algebra to Quadratic Equations, and the principles of Statics, so far as to explain the Mechanical powers.

EXAMINATION D.

1. Chemistry. Examination by questions.

Practical examination in the elements of Chemical Analysis.

2. Mechanics and Mechanism, Hydrostatics and Pneumatics, with especial reference to the construction and action of machines.

This examination will include the Steam Engine generally, Pumps, Balances, the Barometer and Thermometer, Bramah's Press, and methods of determining specific gravity.

Great importance will be attached to good drawing.

3. Optics, with a special reference to optical instruments employed in surveying and astronomical observations.

Any Candidate who has passed Examination A may also offer himself for examination in Drawing or in Music.

No Candidate will be examined in more than two of the above subjects; and a Certificate will be granted to any Candidate who passes a satisfactory examination in any one of these three subjects.

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## UNIVERSITY OF DUBLIN.

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AFTER due inquiry, I find that it is premature to state more with reference to Trinity College, Dublin, than that the subject of Middle-Class Examinations, more or less similar to those adopted at Oxford and Cambridge, has been referred to a Committee, and that some progress has been made in the consideration of the subject, but nothing as yet has been decided.











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